

# **MAINVIEW® for DBCTL IPSM Reference Manual**

**Version 3.3**

**March 2002**



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**BMC Software, Inc.**  
2101 CityWest Blvd.  
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<b>Address</b>	BMC Software, Inc. 2101 CityWest Blvd. Houston TX 77042-2827
<b>Telephone</b>	713 918 8800 or 800 841 2031
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  - product name
  - product version (release number)
  - license number and password (trial or permanent)
- operating-system and environment information
  - machine type
  - operating system type, version, and service pack or program temporary fix (PTF)
  - system hardware configuration
  - serial numbers
  - related software (database, application, and communication) including type, version, and service pack or PTF
- sequence of events leading to the problem
- commands and options that you used
- messages received (and the time and date that you received them)
  - product error messages
  - messages from the operating system, such as `file system full`
  - messages from related software



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# Contents

How to Use This Book .....	xvii
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## Part 1. Introducing IMSplex System Manager (IPSM) .....1

<b>Chapter 1. How IPSM Can Work for You .....</b>	<b>3</b>
Benefits of Using IMSplex System Manager (IPSM) .....	4
How IPSM Works within MAINVIEW for DBCTL .....	12
<b>Chapter 2. IPSM Interface .....</b>	<b>13</b>
Capabilities .....	13
Navigation .....	14
Key Functions.....	15
Online Help .....	15
View Naming Conventions.....	15
Selecting a Starting Point .....	16
<b>Chapter 3. Getting Started with Menus .....</b>	<b>17</b>
DBCTL Easy and Fast Menus .....	17
DBCTL Easy Menu (EZIMS).....	18
IMS Sysplex Easy Menu (EZISSI) .....	19
DBCTL Fast Menu (EZIFAST) .....	20
DBCTL Object Easy Menus .....	21

---

## Part 2. Optimizing System Performance.....23

<b>Chapter 4. Managing IMS Workflow Performance .....</b>	<b>27</b>
Using Workflow Views to Analyze Performance .....	28
Is IMS Resource Usage Too High? .....	30
Can IMS Support Additional Regions/Threads? .....	32
Is OS/390 Affecting IMS Performance? .....	33
Views for Workflow Management – Reference Section .....	35
IMS Activity Views.....	36
DBCCTLGR View – IMS Processing and Resource Usage .....	37
IMS Sysplex Activity Views .....	38
DBCPLXR View – IMS Sysplex Performance .....	39
Region/Thread Occupancy Views .....	40
DRGOCCR View – Region/Thread Occupancy .....	41
<b>Chapter 5. Controlling UOW Elapsed Time and Transaction Delays .....</b>	<b>43</b>
Interpreting Data in UOW Elapsed Time and Transaction Delay Analysis Views .....	44
Analyzing UOW Elapsed Time Problems .....	45
Where Are Delays Occurring? .....	45
Viewing Transaction Delays .....	46
Which Events Are Contributing to UOW Elapsed Time? .....	47
Viewing Transaction Processing Events .....	47
Viewing a List of Completed Transaction Traces .....	48

Views for Transaction Delay Analysis .....	51
Transaction Delays .....	52
IDLTR – Transaction Delays .....	53
IDLTRIO – I/O Delays by Transaction .....	54
IDLTRLH – Latch Delays by Latch .....	55
IDLTRLK – Lock Delays by Transaction .....	56
IDLTROT – Other Delays by Transaction .....	57
IDLTRPL – Pool Delays by Transaction .....	58
Database I/O Delays .....	59
IDLDB – I/O Delays by Database .....	59
IDLDBD – Database I/O Delays by Data Set .....	60
IDLDBI – Database I/O Delays by IMS .....	60
IDLDBP – Database I/O Delays by PSB .....	61
IDLDBTR – Database I/O Delays by Transaction .....	61
IDLDBV – Database I/O Delays by Volume .....	62
Data Set I/O Delays .....	63
IDLDD – I/O Delays by Data Set .....	63
IDLDDI – Data Set I/O Delays by IMS .....	64
IDLDDP – Data Set I/O Delays by PSB .....	64
IDLDDTR – Data Set I/O Delays by Transaction .....	65
IDLDDV – Data Set I/O Delays by Volume .....	65
Volume I/O Delays .....	66
IDLVL – I/O Delays by Volume .....	66
IDLVLDB – Volume I/O Delays by Database .....	67
IDLVLDD – Volume I/O Delays by Data Set .....	67
IDLVLI – Volume I/O Delays by IMS .....	68
IDLVLP – Volume I/O Delays by PSB .....	68
IDLVLTR – Volume I/O Delays by Transaction .....	69
Lock Delays .....	70
IDLLK – Lock Delays .....	70
IDLLKI – Lock Delays by IMS .....	71
IDLLKP – Lock Delays by PSB .....	71
IDLLKTR – Lock Delays by Transaction .....	72
Latch Delays .....	73
IDLLH – Latch Delays .....	73
IDLLHI – Latch Delays by IMS .....	74
IDLLHP – Latch Delays by PSB .....	74
IDLLHTR – Latch Delays by Transaction .....	75
Views for UOW Elapsed Time Analysis .....	76
IMS Processing Events .....	77
IFCTR – Processing Events by Transaction .....	78
IFCTRA – Application by Transaction .....	79
IFCTRD – DL/I by Transaction .....	80
IFCTRI – DL/I Calls by Transaction .....	81
IFCTRP – Sync Point by Transaction .....	82
IFCTRR – ROLS by Transaction .....	83
IFCTRS – Scheduling by Transaction .....	84

<b>Chapter 6. Examining a User Application</b>	<b>85</b>
Interpreting Data in Transaction Trace Views	87
Views for Application Performance Analysis	88
Transaction Trace Views	88
ITALIST – List of Transaction Trace Data Sets	89
ITALISTD – Trace Detail	90
ITAQUERY – Select Trace Data	91
ITASUM – Trace Entries	92
ITASUMZ – Trace Entries Summarized by Transaction	93
<b>Chapter 7. Monitoring IMS Workloads and Resources</b>	<b>95</b>
IMON – Target Monitor Summary	96
ISERV – Active Monitors	96
IMAREAZ – Target by Area Monitor Summary	97
IMWARN – Monitors in Warning	97
MAINVIEW for DBCTL Monitors	98
IMS Workload Monitors	99
Fast Path Activity	99
Global Region Calls	100
Elapsed Timing	100
IMS Resource Monitors	101
IMS Regions/CICS Threads	101
IMS Database	102
IMS Internals	103
IMS Interaction with OS/390	105
IRLM	106
<b>Chapter 8. Creating IMS Workload Definitions</b>	<b>107</b>
Elements of a Workload Definition	107
Workload and Composite Names	107
Service-Level Objectives	107
Monitoring Time Range	107
Target ID and System ID	107
Workload Resource Fields	107
Planning IMS Workload Definitions	108
Establishing Workload Conventions	108
Workload Names	108
Composite Names	108
Defining Workload Service-Level Objectives	108
Identifying Critical Workload Monitoring Periods	109
Creating a New Workload Definition	109
Accessing the IWKLDDEF View	109
Opening the Add IMS Workload Definition Dialog Box	110
Assigning the New Workload Definition Settings	111
Workload and Composite Names	111
Target and System IDs	111
Description	111
Monitored IMS Resources	111
Response Time and Percent of Transactions Fields	112
Include Queuing	112
Saving and Installing a New Workload Definition	112
Commands in the IWKLDDEF View and the IMS Workload Definition Dialog Boxes	113
Maintaining Workload Definitions	114
Changing a Workload Definition	114
Deleting and Recovering Workload Definitions	115

<b>Part 3. Solving Realtime Problems .....</b>	<b>117</b>
<b>Chapter 9. Monitoring Region/Thread Activity .....</b>	<b>119</b>
Accessing the Region Activity Views .....	120
Region Activity Summary View .....	121
Region Activity Detail View .....	123
Region Activity DL/I View .....	125
Region Activity Fast Path View .....	126
Region/Program View .....	127
Region Activity Program Isolation (PI) View .....	129
<b>Chapter 10. Recognizing and Resolving N-Way Data Sharing Resource         Contention .....</b>	<b>131</b>
Accessing the IRLM Lock Views .....	132
Analyzing Lock Problems .....	132
Region Lock Summary View .....	133
Region Lock List View .....	135
Region Lock Wait List View .....	137
Resource Lock Summary View .....	138
Resource Lock List View .....	140
Resource Lock Wait List View .....	142
 <b>Part 4. Managing IMS Operations .....</b>	 <b>143</b>
<b>Chapter 11. Managing Fast Path DEDB Areas .....</b>	<b>145</b>
Accessing the Fast Path DEDB Area Views .....	146
Fast Path DEDB Area Overview View .....	147
Fast Path DEDB Area Detail View .....	148
Fast Path DEDB Area Statistics View .....	149
Fast Path DEDB Area Status View .....	150
Fast Path DEDB Area Object Easy Menu .....	151
<b>Chapter 12. Managing Databases .....</b>	<b>153</b>
Accessing the Database Views .....	154
Database Overview View .....	155
Database Detail View .....	157
Database Type Summary View .....	158
Database Status Summary View .....	159
Database Object Easy Menu .....	160
<b>Chapter 13. Managing Application Programs .....</b>	<b>161</b>
Accessing the Program Views .....	162
Program Object Easy Menu .....	163
Program Overview View .....	164
Program Count by Type View .....	165
Program Count by Type and Status View .....	166
<b>Chapter 14. Cross-Referencing IMS Resources .....</b>	<b>167</b>
Accessing the Cross-Reference Views .....	168
Assessing the Impact of Actions against IMS Resources .....	169
Taking a Database Offline .....	169
Solving Failure to Take Database Offline .....	169
Solving Program Failure at Startup .....	169



Cross-Reference All Records View .....	170
Program Cross-Reference Summary View .....	171
Program-to-Database Cross-Reference View .....	172
Database Cross-Reference Summary View .....	174
Database-to-Program Cross-Reference View .....	175
 <b>Chapter 15. Managing IMS Database Activity .....</b>	<b>177</b>
Accessing the IMS Database Activity Views .....	179
Analyzing a Data Sharing Group .....	179
Analyzing an Individual IMS .....	180
Database Activity Detail View – Data Sharing Group Level .....	181
Database Activity View – IMS System Level .....	183
Database Activity Detail View .....	185
Database Activity View – Logical (PCB) Level .....	188
Database I/O Activity View – Physical Database Level .....	190
Database I/O Activity View – Database/Volume Level .....	192
Database I/O Activity View – Volume Level .....	194
Database Activity Detail View – VSAM Buffer Pool Level .....	196
Database Activity Detail View – OSAM Buffer Pool Level .....	198
Database Activity View – VSAM Buffer Pool Level .....	200
Database Activity View – OSAM Buffer Pool Level .....	202
 <b>Chapter 16. Analyzing Data Sets .....</b>	<b>205</b>
Accessing the Data Set Views .....	205
Hyperlinks in Data Set Views .....	206
Data Set Summary Views .....	208
Data Set Summary Realtime View (DSVSUMR) .....	208
Data Set Summary Interval View (DSVSUM) .....	209
Data Set Detail Views .....	210
Data Set Detail Realtime View (DSVDTLR) .....	210
Data Set Detail Interval View (DSVDTL) .....	211
 <b>Part 5. Managing IPSM .....</b>	<b>213</b>
 <b>Chapter 17. Setting Target Samplers .....</b>	<b>215</b>
ISAMP – Sampler Administration .....	215
ISAMPD – Sampler Administration Detail .....	217
Controlling Sampler Defaults .....	218
 <b>Chapter 18. Controlling Samplers .....</b>	<b>219</b>
ISAMPOP – Sampler Operations Administration .....	219
ISAMPOPD – Sampler Operations Administration Detail .....	220
 <b>Chapter 19. Securing IPSM Resources .....</b>	<b>221</b>
SERDEF – Security Resource Definitions .....	221
SERDEFE – Security Resource Definition Detail .....	222
 <b>Chapter 20. Viewing a List of BMC Software IMS Products .....</b>	<b>223</b>
Accessing the Product Views .....	223
BMC Software Products Summary View .....	224
BMC Software Products Detail View .....	225

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<b>Part 6. Glossary and Index.....</b>	<b>227</b>
<b>Glossary .....</b>	<b>229</b>
<b>Index .....</b>	<b>241</b>

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## Figures

1.	Overview of IPSM . . . . .	5
2.	Using IPSM to Optimize System Performance . . . . .	7
3.	Using IPSM to Solve Realtime Problems . . . . .	9
4.	Using IPSM to Manage IMS Operations . . . . .	11
5.	DBCTL Easy Menu (EZIMS) . . . . .	18
6.	IMS Sysplex Easy Menu (EZISSI) . . . . .	19
7.	DBCTL Fast Menu (EZIFAST) . . . . .	20
8.	IMS Activity View (DBCCTLGR) - Bar Graph Form . . . . .	28
9.	IMS Activity View (DBCCTLGR) - Text Form . . . . .	28
10.	Views for Checking IMS Resource Usage . . . . .	30
11.	Fields for Checking IMS Resource Usage (DBCCTLGR View) . . . . .	30
12.	IMS Activity Detail View (DBCCTLGR) . . . . .	31
13.	Fields for Checking IMS Ability to Support Additional Regions/Threads . . . . .	32
14.	Views for Checking Effect of OS/390 Performance . . . . .	33
15.	Fields for Checking OS/390 Processing . . . . .	34
16.	DBCCTLGR – Sample IMS Activity View . . . . .	37
17.	DBCPLXR – Sample IMS Sysplex Activity View . . . . .	39
18.	DRGOCCR – Sample Region/Thread Occupancy View . . . . .	41
19.	Field for Looking for Transaction Delays . . . . .	45
20.	Views for Determining Where Delays Are Occurring . . . . .	46
21.	IDLTR View . . . . .	47
22.	Views for Evaluating Transaction Processing Events . . . . .	47
23.	IFCTR View . . . . .	48
24.	Checking Fields to Look for Abnormal Indicator . . . . .	48
25.	Views for Checking Completed Transaction Traces . . . . .	49
26.	ITALIST View . . . . .	50
27.	IDLTR View . . . . .	53
28.	IDLTRIO View . . . . .	54
29.	IDLTRLH View . . . . .	55
30.	IDLTRLK View . . . . .	56
31.	IDLTROTR View . . . . .	57
32.	IDLTRPL View . . . . .	58
33.	IDLDB View . . . . .	59
34.	IDLDBD View . . . . .	60
35.	IDLDBI View . . . . .	60
36.	IDLDBP View . . . . .	61
37.	IDLDBTR View . . . . .	61
38.	IDLDBV View . . . . .	62
39.	IDLDD View . . . . .	63
40.	IDLDDI View . . . . .	64
41.	IDLDDP View . . . . .	64
42.	IDLDDTR View . . . . .	65
43.	IDLDDV View . . . . .	65
44.	IDLVL View . . . . .	66
45.	IDLVLDB View . . . . .	67
46.	IDLVLDD View . . . . .	67
47.	IDLVLI View . . . . .	68
48.	IDLVLP View . . . . .	68
49.	IDLVLTR View . . . . .	69
50.	IDLLK View . . . . .	70
51.	IDLLKI View . . . . .	71

52.	IDLLKP View . . . . .	71
53.	IDLLKTR View . . . . .	72
54.	IDLLH View . . . . .	73
55.	IDLLHI View . . . . .	74
56.	IDLLHP View . . . . .	74
57.	IDLLHTR View . . . . .	75
58.	IFCTR View . . . . .	78
59.	IFCTRA View . . . . .	79
60.	IFCTRD View . . . . .	80
61.	IFCTRI View . . . . .	81
62.	IFCTRP View . . . . .	82
63.	IFCTRR View . . . . .	83
64.	IFCTRS View . . . . .	84
65.	Tracing an Application . . . . .	85
66.	ITALIST View . . . . .	89
67.	ITALISTD View . . . . .	90
68.	ITAQUERY View . . . . .	91
69.	ITASUM View . . . . .	92
70.	ITASUMZ View . . . . .	93
71.	IMON View . . . . .	96
72.	ISERV View . . . . .	96
73.	IMAREAZ View . . . . .	97
74.	IMWARN View . . . . .	97
75.	IINQBG View . . . . .	98
76.	IWKLDDEF Workload Definition List View, Browse Mode . . . . .	109
77.	IWKLDDEF Workload Definition List View, Edit Mode . . . . .	110
78.	Add IMS Workload Definition Dialog Box . . . . .	110
79.	DBCTL Easy Menu (EZIMS) . . . . .	120
80.	Region Activity Summary View (DRGNSUMR) . . . . .	121
81.	Region Activity Summary View, Scrolled Right . . . . .	121
82.	Region Activity Detail View (DRGNDTLR) . . . . .	123
83.	Region Activity DL/I View (DRGNDLIR) . . . . .	125
84.	Region Activity DL/I View, Scrolled Right . . . . .	125
85.	Region Activity Fast Path View (DRGNFPLR) . . . . .	126
86.	Region/Program View (DRGNPGMR) . . . . .	127
87.	Region/Program View, Scrolled Right . . . . .	127
88.	Region Activity Program Isolation (PI) View (DRGNPILR) . . . . .	129
89.	Region Lock Summary View (ILKRGSUM) . . . . .	133
90.	Region Lock Summary View, Scrolled Right . . . . .	133
91.	Region Lock List View (ILKRGLST) . . . . .	135
92.	Region Lock List View, Scrolled Right . . . . .	135
93.	Region Lock Wait List View (ILKRGWT) . . . . .	137
94.	Region Lock Wait List View, Scrolled Right . . . . .	137
95.	Resource Lock Summary View (ILKRSSUM) . . . . .	138
96.	Resource Lock Summary View, Scrolled Right . . . . .	138
97.	Resource Lock List View (ILKRSLST) . . . . .	140
98.	Resource Lock List View, Scrolled Right . . . . .	140
99.	Resource Lock Wait List View (ILKR SWT) . . . . .	142
100.	Resource Lock Wait List View, Scrolled Right . . . . .	142
101.	Fast Path DEDB Area Overview View (IFPSUMR) . . . . .	147
102.	Fast Path DEDB Area Overview View, Scrolled Right . . . . .	147
103.	Fast Path DEDB Area Detail View (IFPDTLR) . . . . .	148
104.	Fast Path DEDB Area Statistics View (IFPORGR) . . . . .	149
105.	Fast Path DEDB Area Statistics View, Scrolled Right . . . . .	149

106.	Fast Path DEDB Area Status View (IFPSTAR) . . . . .	150
107.	Fast Path DEDB Area Object Easy Menu (IFPMR) . . . . .	151
108.	Database Overview View (IDBSUMR) . . . . .	155
109.	Database Overview View, Scrolled Right . . . . .	156
110.	Database Detail View (IDBDTLR) . . . . .	157
111.	Database Type Summary View (IDBTYPR) . . . . .	158
112.	Database Status Summary View (IDBSTAR) . . . . .	159
113.	Database Object Easy Menu (IDBMR) . . . . .	160
114.	Program Object Easy Menu . . . . .	163
115.	Program Overview View (IPGSUMR) . . . . .	164
116.	Program Count by Type View (IPGTYPR) . . . . .	165
117.	Program Count by Type and Status View (IPGSTAR) . . . . .	166
118.	IMS Cross-Reference Menu (EZIMSX) . . . . .	168
119.	Cross-Reference All Records View (IXRSUMR) . . . . .	170
120.	Program Cross-Reference Summary View (IXPSUMR) . . . . .	171
121.	Program-to-Database Cross-Reference View (IXPDSUMR) . . . . .	172
122.	Program-to-Database Cross-Reference View, Scrolled Right . . . . .	173
123.	Database Cross-Reference Summary View (IXDSUMR) . . . . .	174
124.	Database-to-Program Cross-Reference View (IXDPSUMR) . . . . .	175
125.	Database-to-Program Cross-Reference View, Scrolled Right . . . . .	176
126.	Database Activity Detail View – Data Sharing Group Level (IDAGDTLR) . . . . .	181
127.	Database Activity View – IMS System Level (IDASSUMR) . . . . .	183
128.	Database Activity View – IMS System Level, Scrolled Right . . . . .	183
129.	Database Activity View – IMS System Level, Scrolled Right Again . . . . .	183
130.	Database Activity View – IMS System Level, Scrolled Right Again . . . . .	184
131.	Database Activity Detail View (IDASDTLR) . . . . .	186
132.	Database Activity View – Logical (PCB) Level (IDALSUMR) . . . . .	188
133.	Database Activity View – Logical (PCB) Level, Scrolled Right . . . . .	188
134.	Database Activity View – Logical (PCB) Level, Scrolled Right Again . . . . .	188
135.	Database I/O Activity View – Physical Database Level (IDAPSUMR) . . . . .	190
136.	Database I/O Activity View – Physical Database Level, Scrolled Right . . . . .	190
137.	Database I/O Activity View – Physical Database Level, Scrolled Right Again . . . . .	191
138.	Database I/O Activity View – Database/Volume Level (IDAXSUMR) . . . . .	192
139.	Database I/O Activity View – Database/Volume Level, Scrolled Right . . . . .	192
140.	Database I/O Activity View – Database/Volume Level, Scrolled Right Again . . . . .	193
141.	Database I/O Activity View – Database/Volume Level, Scrolled Right Again . . . . .	193
142.	Database I/O Activity View – Volume Level (IDAVSUMR) . . . . .	194
143.	Database I/O Activity View – Volume Level, Scrolled Right . . . . .	194
144.	Database Activity Detail View – VSAM Buffer Pool Level (IDABVDTR) . . . . .	196
145.	Database Activity Detail View – OSAM Buffer Pool Level (IDABODTR) . . . . .	198
146.	Database Activity View – VSAM Buffer Pool Level (IDABVSMR) . . . . .	200
147.	Database Activity View – VSAM Buffer Pool Level, Scrolled Right . . . . .	200
148.	Database Activity View – VSAM Buffer Pool Level, Scrolled Right Again . . . . .	201
149.	Database Activity View – OSAM Buffer Pool Level (IDABOSMR) . . . . .	202
150.	Database Activity View – OSAM Buffer Pool Level, Scrolled Right . . . . .	202
151.	Database Activity View – OSAM Buffer Pool Level, Scrolled Right Again . . . . .	202
152.	MAINVIEW for OS/390 JUDEV View . . . . .	206
153.	Data Set Summary Realtime View (DSVSUMR) . . . . .	208
154.	Data Set Summary Realtime View, Scrolled Right . . . . .	208
155.	Data Set Summary Interval View (DSVSUM) . . . . .	209
156.	Data Set Summary Interval View, Scrolled Right . . . . .	209
157.	Data Set Detail Realtime View (DSVDTLR) . . . . .	210
158.	Data Set Detail Interval View (DSVDTL) . . . . .	211
159.	ISAMP View . . . . .	215

160.	ISAMPD View .....	217
161.	ISAMP View Dialog Box .....	218
162.	ISAMPOP View .....	219
163.	ISAMPOPD View .....	220
164.	SERDEF View .....	221
165.	SERDEFE View .....	222
166.	BMC Software Products Summary View (IPRDSUM) .....	224
167.	BMC Software Products Detail View (IPRDDTL) .....	225

---

## Tables

1.	IMS Activity Views . . . . .	36
2.	IMS Sysplex Activity Views . . . . .	38
3.	Region/Thread Occupancy Views . . . . .	40
4.	Transaction Delay Views . . . . .	52
5.	Database I/O Delay Views . . . . .	59
6.	Data Set I/O Delay Views . . . . .	63
7.	Volume I/O Delay Views . . . . .	66
8.	Lock Delay Views . . . . .	70
9.	Latch Delay Views . . . . .	73
10.	IMS Processing Event Views . . . . .	77
11.	Transaction Trace Views . . . . .	88
12.	IMS Workload Monitors for Fast Path Activity . . . . .	99
13.	IMS Workload Monitors for Global Region Calls . . . . .	100
14.	IMS Workload Monitors for Elapsed Timing . . . . .	100
15.	IMS Resource Monitors for IMS Regions/CICS Threads . . . . .	101
16.	IMS Resource Monitors for Database Activity . . . . .	102
17.	IMS Internals Resource Monitors . . . . .	103
18.	IMS Resource Monitors for OS/390 . . . . .	105
19.	IMS Resource Monitors for IRLM . . . . .	106
20.	Primary and Line Commands on the IWKLDDEF View . . . . .	113
21.	Primary Commands on the Dialog Boxes for Adding and Changing IMS Workload Definitions . . . . .	113
22.	Views that Group Information by Data Sharing Group . . . . .	178
23.	Views that Group Information by IMS . . . . .	178





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## How to Use This Book

This book documents the features and functions of the IMSplex System Manager (IPSM), a MAINVIEW® for DBCTL component.

IPSM works in the MAINVIEW window environment to provide SSI (single system image) views about the performance of multiple IMS regions and systems. Authorized users can use a single terminal to watch not only multiple IMSs but also CICS, DB2, and OS/390 from a single point of control.

This book is intended for use by the IMS master terminal operator (MTO), system programmer, database administrator, or performance analyst who monitors the status, activity, and performance of IMS and its resources.

For information about new features in the current release of MAINVIEW for DBCTL, see the product Release Notes, which are available on the BMC Software Support Web pages.

You can view this book online with Adobe Acrobat Reader; contact your system administrator for assistance.

---

## MAINVIEW for DBCTL Product Library

The MAINVIEW for DBCTL product library contains the following documents:

- *MAINVIEW for DBCTL Customization Guide*
- *MAINVIEW for DBCTL Analyzers, Monitors, and Traces Reference Manual*
- *MAINVIEW for IMSplex System Manager User Guide* (this book)
- *MAINVIEW for DBCTL Release Notes*

**Note:** Although MAINVIEW for IMS is often referred to as “MVIMS” in this book, the abbreviation is used for brevity only and does not represent a legal product name of BMC Software.

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## How This Book Is Organized

This book contains the following parts:

- Part 1 describes IMSplex System Manager (IPSM).
- Part 2 describes how to use IPSM to optimize IMS performance. It describes
  - IMS workflow views
  - UOW elapsed time and transaction delay analysis views
  - transaction trace views
  - monitor views
- Part 3 describes how to use the IPSM component to solve realtime problems. It describes
  - region activity views
  - IRLM lock views
- Part 4 describes how to use the IPSM component to manage IMS operations. It describes the use of
  - Fast Path DEDB area views
  - database views
  - program views
  - cross-reference views
  - IMS database activity views
  - data set views
- Part 5 describes system administration and operations views used to define an IMS workload and set and control the sampling of a target system.
- Part 6 contains the glossary and index.

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## Related MAINVIEW Products

The related MAINVIEW-based products include

- MAINVIEW<sup>®</sup> AutoOPERATOR<sup>™</sup>
- MAINVIEW<sup>®</sup> for CICS
- MAINVIEW<sup>®</sup> for DB2<sup>®</sup>
- MAINVIEW<sup>®</sup> for DBCTL
- MAINVIEW<sup>®</sup> FOCAL POINT
- MAINVIEW<sup>®</sup> for IMS
- MAINVIEW<sup>®</sup> for MQSeries
- MAINVIEW<sup>®</sup> for OS/390
- MAINVIEW<sup>®</sup> VistaPoint<sup>™</sup>

Customization and administration instructions for the MAINVIEW-based functions are provided in the *MAINVIEW Common Customization Guide*. The following manuals document product-specific customization instructions:

- *MAINVIEW AutoOPERATOR Customization Guide*
- *MAINVIEW for CICS Customization Guide*
- *MAINVIEW for DB2 Customization Guide*
- *MAINVIEW for DBCTL Customization Guide*
- *MAINVIEW for IMS Online – Customization Guide*
- *MAINVIEW for IMS Offline – Customization and Utilities Guide*
- *MAINVIEW for OS/390 Customization Guide*

The following books document the use of general services common to MAINVIEW for DBCTL and related products:

- *MAINVIEW AutoOPERATOR Basic Automation Guide*
- *MAINVIEW AutoOPERATOR Advanced Automation Guide for CLIST EXECs*
- *MAINVIEW AutoOPERATOR Advanced Automation Guide for REXX EXECs*
- *MAINVIEW for CICS PERFORMANCE REPORTER User Guide*
- *MAINVIEW for DB2 User Guide*, Volumes 1, 2, and 3
- *MAINVIEW for IMS Online – Analyzers Reference Manual*
- *MAINVIEW for IMS Online – Monitors and Traces Reference Manual*

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## Related IBM Publications

*OS/390 Initialization and Tuning Guide*

*IMS Operator Reference*

*System Administration Guide*

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## Conventions Used in This Manual

The following symbols are used to define command syntax, are ***not*** part of the command, and should never be typed as part of the command:

- Brackets [ ] enclose optional parameters or keywords.
- Braces { } enclose a list of parameters; one must be chosen.
- A line | separates alternative options; one can be chosen.
- An underlined parameter is the default.

The following command syntax conventions also apply:

- An ITEM IN CAPITAL LETTERS must be typed exactly as shown.
- Items in *italicized, lowercase* letters are values that you supply.
- When a command is shown in uppercase and lowercase letters, such as **HSplit**, the uppercase letters show the command abbreviation that you can use (**HS**, for example). The lowercase letters complete the entire command name. Typing the entire command name is an optional, alternative way of entering the command.
- Commands without an abbreviation (**END**, for example) appear in all uppercase letters.

---

## Part 1. Introducing IMSplex System Manager (IPSM)

This part introduces IPSM and describes the benefits that it provides.

<b>Chapter 1. How IPSM Can Work for You</b> .....	<b>3</b>
Benefits of Using IMSplex System Manager (IPSM) .....	4
How IPSM Works within MAINVIEW for DBCTL .....	12
 <b>Chapter 2. IPSM Interface</b> .....	 <b>13</b>
Capabilities .....	13
Navigation .....	14
Key Functions .....	15
Online Help .....	15
View Naming Conventions .....	15
Selecting a Starting Point .....	16
 <b>Chapter 3. Getting Started with Menus</b> .....	 <b>17</b>
DBCTL Easy and Fast Menus .....	17
DBCTL Easy Menu (EZIMS) .....	18
IMS Sysplex Easy Menu (EZISSI) .....	19
DBCTL Fast Menu (EZIFAST) .....	20
DBCTL Object Easy Menus .....	21



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## Chapter 1. How IPSM Can Work for You

IMSPlex System Manager (IPSM) provides Single System Image views of resources and bottlenecks across single or multiple IMS regions and systems. IPSM exploits IBM Parallel Sysplex technology and simplifies the management of IMS applications on traditional mainframes.

IPSM helps you

- Optimize system performance

IPSM helps you discover performance and workload problems wherever they occur—across multiple OS/390 and IMS systems. With IPSM, you can

- Manage the progress, throughput, and unit of work elapsed times for IMS workloads and transactions
- Examine workload throughput and capacity, as well as region/thread occupancy for IMS and IMSPlex systems
- Identify workload bottlenecks and delays caused by resource and capacity constraints

- Solve realtime problems

IPSM helps you solve realtime problems quickly. IPSM makes it easy to

- Monitor region/thread activity
- Recognize and resolve N-way data sharing contention

- Manage IMS operations

IPSM is a powerful tool for managing IMS operations. You can use it to

- Control and manage Fast Path DEDB areas
- Control and manage full-function databases
- Control and manage application programs
- Cross-reference IMS resources—databases and programs
- Recognize and solve problems with IMS database activity
- Analyze IMS log data sets

IPSM puts you in the MAINVIEW window environment as it monitors and reports the information you need to see.

---

## Benefits of Using IMSplex System Manager (IPSM)

From a single user session, you can monitor and analyze the performance of one or more IMS systems across a sysplex. You can transfer quickly to other MAINVIEW products and you can manage CICS, DB2, and OS/390 from a single point of control.

IPSM collects and organizes the information you want into online views.

**Workflow views** allow system programmers to determine how much IMS transaction processing capacity is available and how much is being used at any given time. The views show any capacity shortages.

**Transaction delay analysis views** categorize transaction or workload delays and help you analyze individual resources that are causing delays. System programmers can use these views to ascertain which lock or DASD volume is causing delays and whether the delay affects a single IMS, a data-sharing group, OS/390, or an entire sysplex.

**Unit of work elapsed time views** present a picture of the life cycle of transactions running in IMS. System programmers can use these views to determine whether a transaction is being held up in scheduling, application processing, database access, or sync point processing.

**Realtime problem-solving views** help operators and system programmers solve realtime problems involving resources across single or multiple IMS systems. The views allow easy monitoring of region activity and quick analysis of lock problems stemming from N-way data sharing resource contention.

**Views for managing IMS operations** allow database administrators, system programmers, and application programmers to manage Fast Path DEDB areas, full-function databases, and application programs. The views, which allow easy cross-referencing of IMS resources, also assist in the management of IMS database activity.

Figure 1 on page 5 gives you an overview of IPSM and the views it provides.



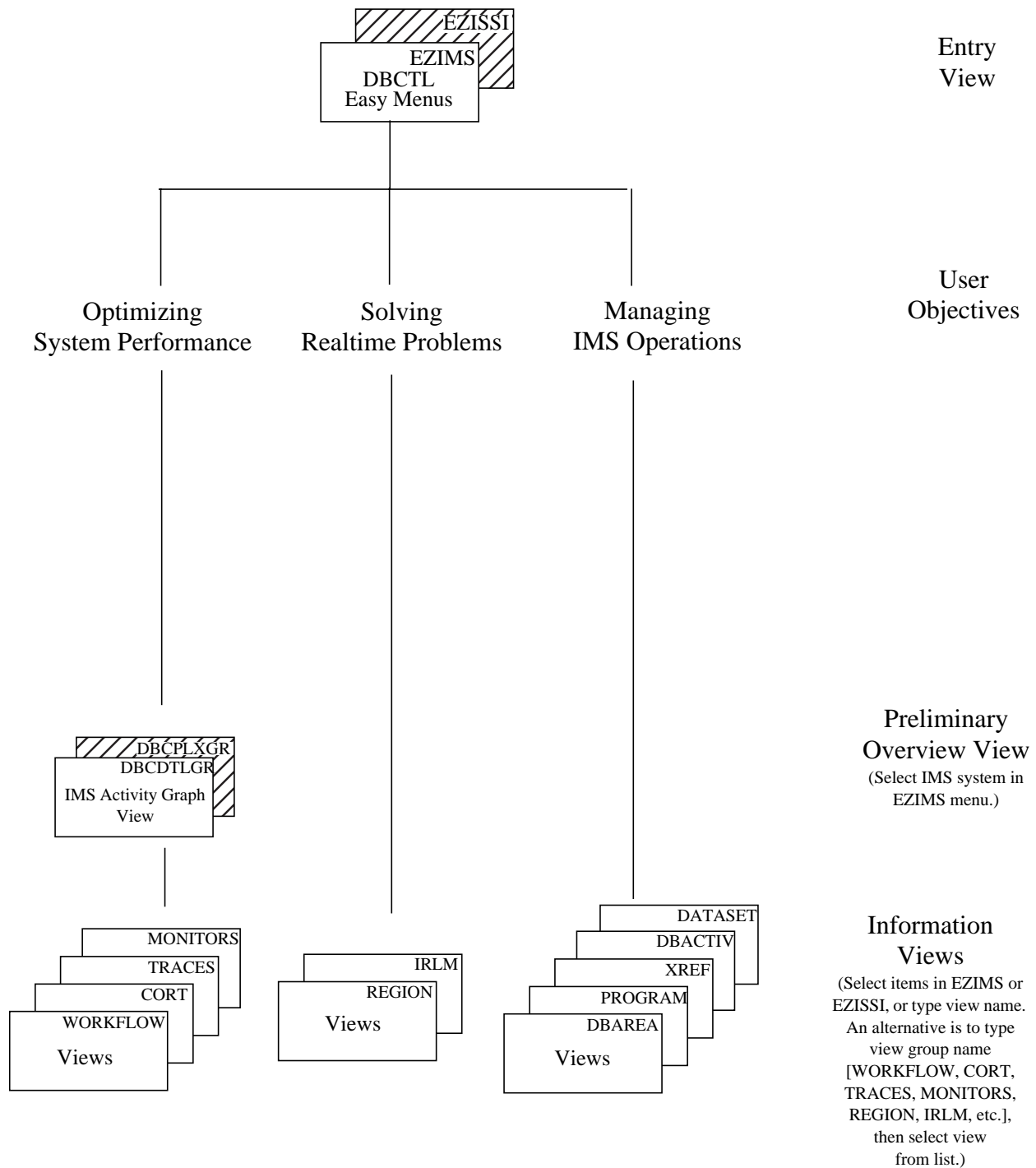


Figure 1. Overview of IPSM

Shaded boxes denote sysplex version of a view.

Figure 2 on page 7 gives you an overview of how to use IPSM to optimize system performance.

See Part 2 of this book (“Optimizing System Performance”) for a description of how you can use IPSM views to

- Manage your IMS workflow
- Analyze unit of work elapsed time
- Determine the causes of transaction delays

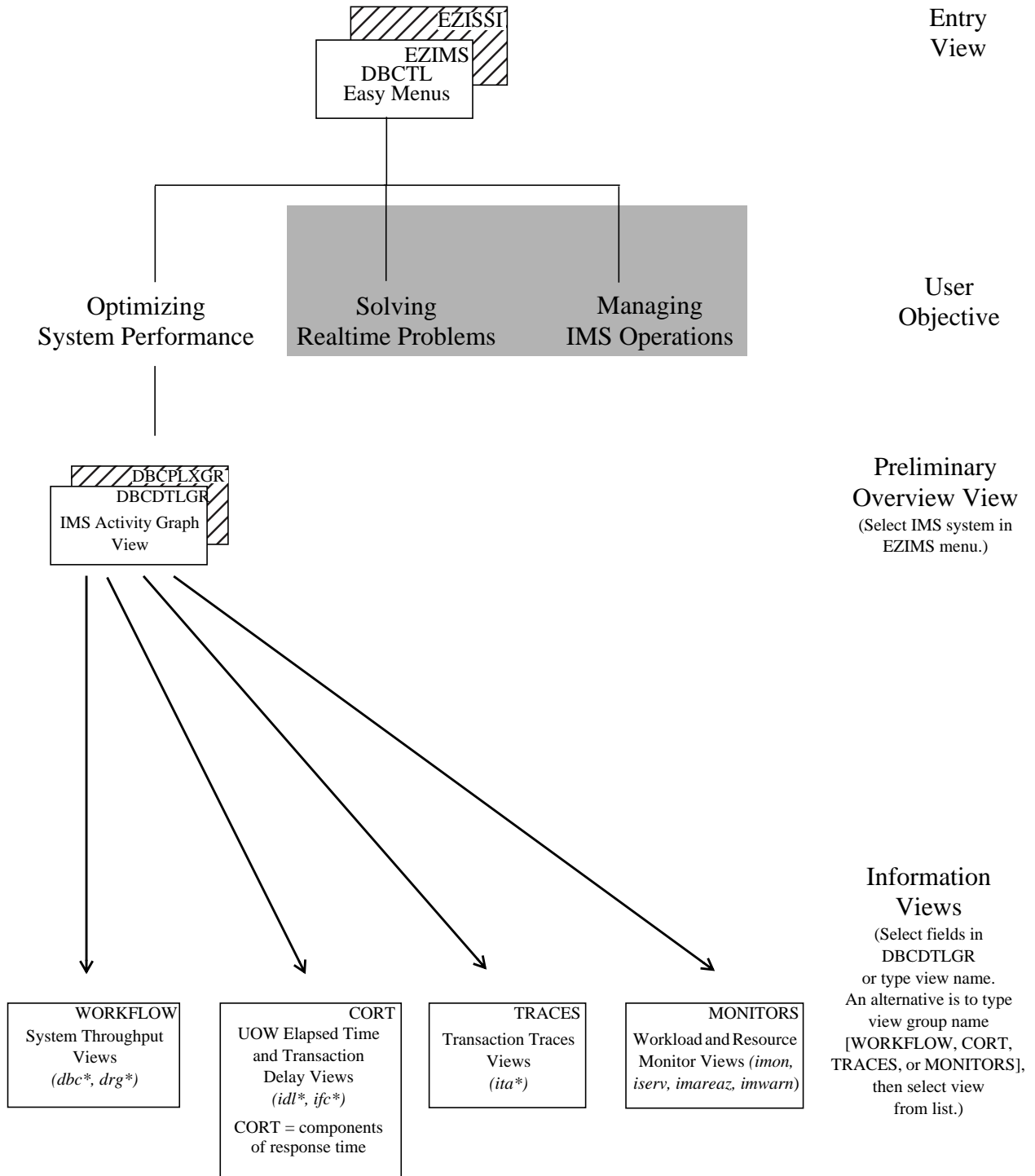


Figure 2. Using IPSM to Optimize System Performance

\* To see a list of these views, type **VIEWS nnn\*** (where *nnn* represents the first three characters of the view name). You can then select a view from the list presented.

Figure 3 on page 9 gives you an overview of how to use IPSM to solve realtime problems.

See Part 3 of this book (~) for a description of how you can use IPSM views to analyze and solve realtime problems in the areas of

- Region/thread activity
- IRLM locking

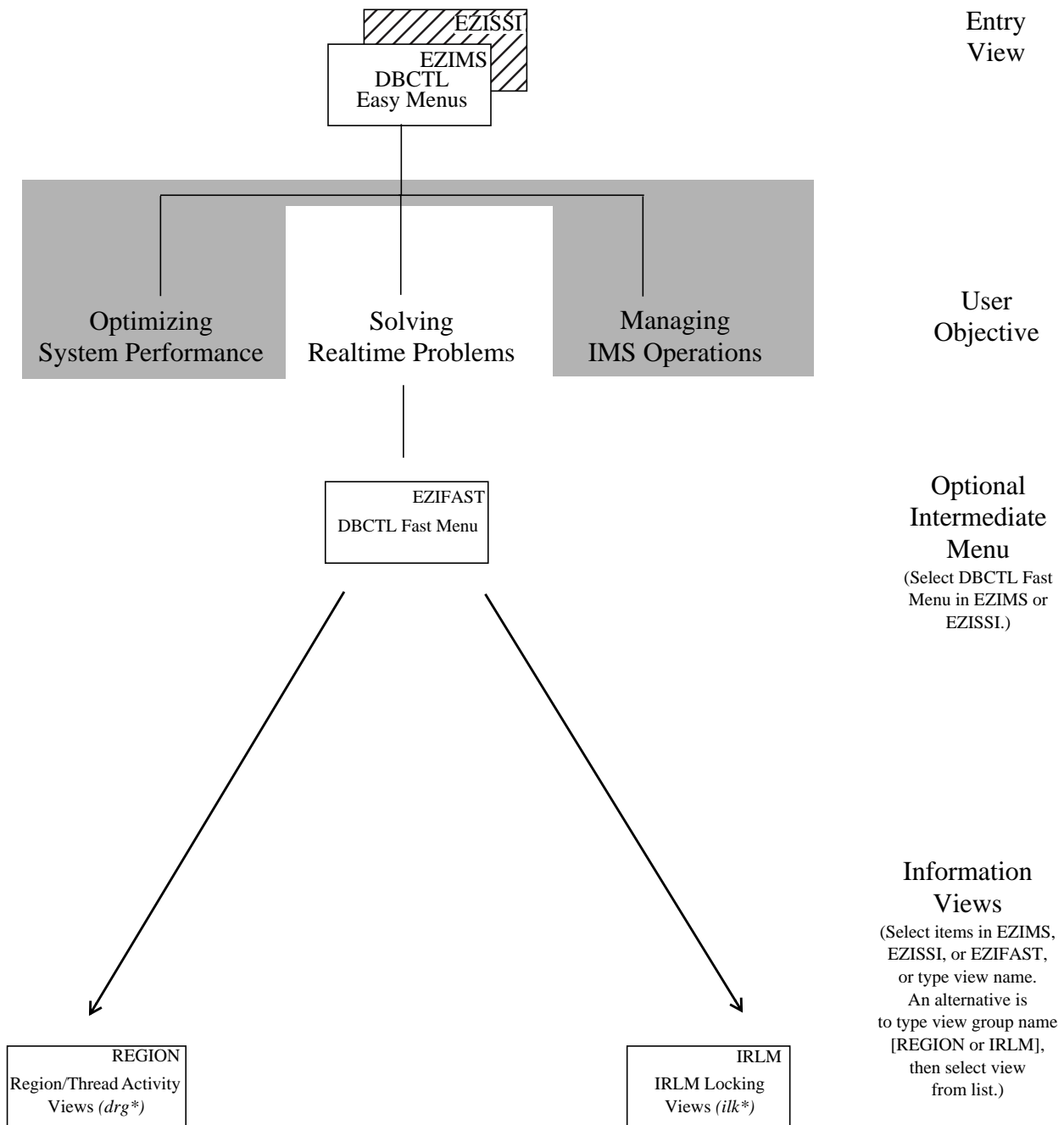


Figure 3. Using IPSM to Solve Realtime Problems

\* To see a list of these views, type `VIEWS nn-nnn*` (where *nn-*nnn** represents the first several characters of the view name). You can then select a view from the list presented.

Figure 4 on page 11 gives you an overview of how to use IPSM to manage IMS operations.

See Part 4 of this book (“Managing IMS Operations”) for a description of how you can use IPSM views to manage IMS operations, including

- Fast Path DEDB areas
- IMS databases
- Application programs
- Cross-referencing databases and programs
- Database activity
- IMS data sets

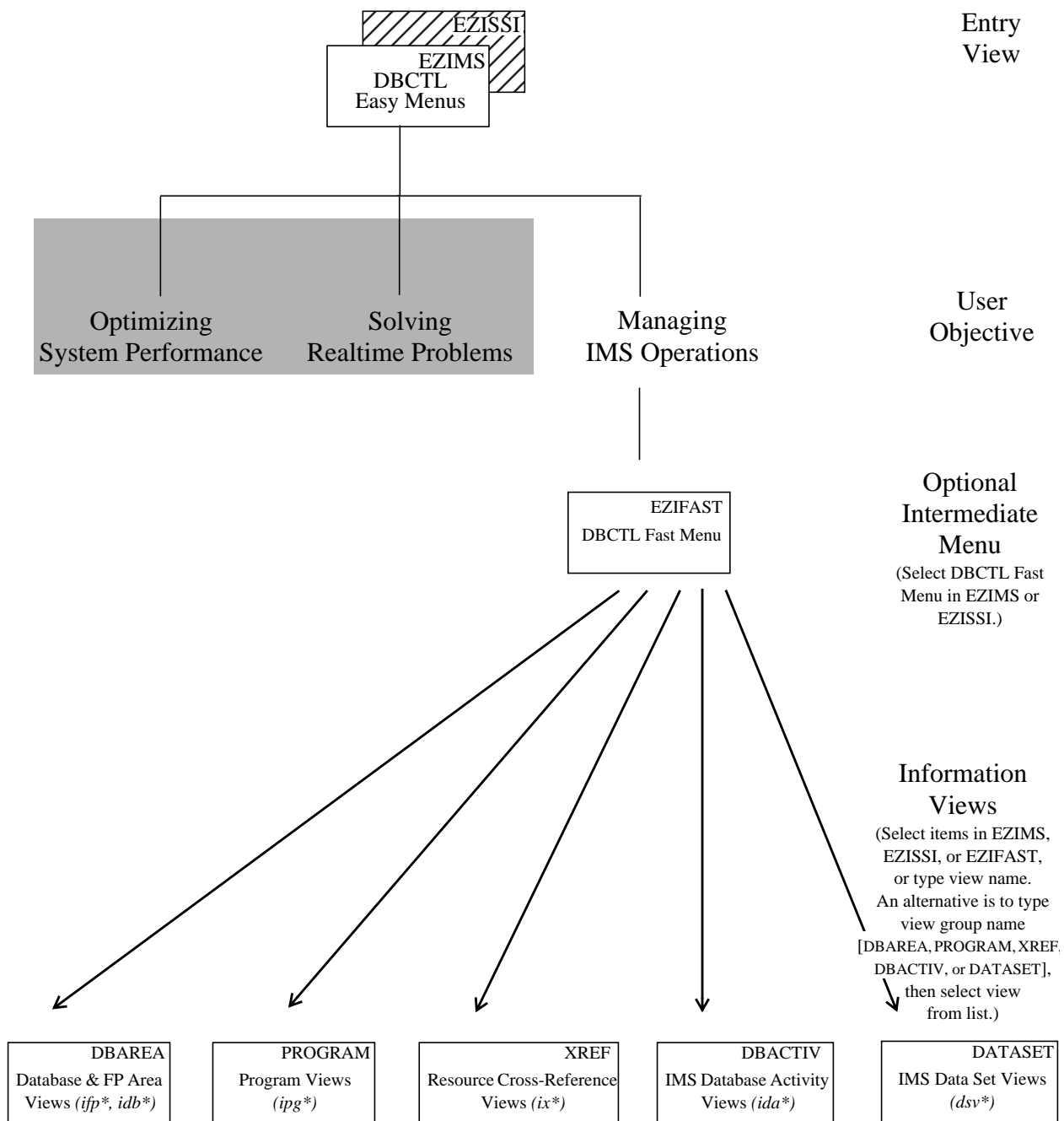


Figure 4. Using IPISM to Manage IMS Operations

\* To see a list of these views, type **VIEWS nn-*nnn*\*** (where *nn-*nnn** represents the first several characters of the view name). You can then select a view from the list presented.

---

## How IPSM Works within MAINVIEW for DBCTL

IPSM views provide you with direct hyperlinks to other MAINVIEW for DBCTL (MVDBC) services. You can use IPSM views to spot potential problem areas quickly, and then access other MVDBC views for additional problem determination if necessary.

IPSM views direct you to the MVDBC information you need:

- Detailed analyzer information about the interaction of IMS transactions under varying processing conditions
- Precise analyzer workload performance details, so you can determine causes of overloads or contention
- Traces of transaction processing and resource usage, so you can isolate application performance problems
- Details about resource activity and status, so you can look for bottlenecks as they occur
- Database conflicts and status of buffer pools, so you can see resource usage changes as they occur
- Realtime warnings when monitored workload volumes exceed safe thresholds
- Realtime warnings when monitored unit of work elapsed time does not meet service-level objectives
- Realtime warnings when monitored resources exceed user-defined performance thresholds

For more information about these services, see the *MAINVIEW for DBCTL Analyzers, Monitors, and Traces Reference Manual*.



---

## Chapter 2. IPSM Interface

This chapter discusses the IMSplex System Manager (IPSM) user interface. If you are already familiar with the IPSM interface, you might want to skip this chapter.

The IPSM interface takes advantage of the MAINVIEW windows mode technology. What this means to you is that

- You have unique capabilities in this environment
- You have another way of navigating

The MAINVIEW windows mode environment is discussed in the “Working in Windows Mode” section of the *Using MAINVIEW* manual. A brief synopsis of the information is presented in *MAINVIEW Quick Reference*. Users familiar with ISPF will recognize many of the key functions.

---

### Capabilities

With the IPSM user interface, you have additional capabilities for viewing information and performing actions. IPSM displays information in views. With these views, you can

- Set targets for the system or subsystem you wish to monitor
- Monitor multiple targets together in a Single System Image (SSI) context
- View historical data
- Issue primary commands in any view and line commands in many views
- Hyperlink between views
- Open multiple windows to see different views simultaneously, and then save the configuration
- Sort information by any field
- Filter to see only the information you want to see
- Customize views to
  - Include/exclude any field
  - Rearrange fields or change their width or headings
  - Create your own hyperlinks between views
  - Summarize and display data from many resources in a single row
  - Set thresholds, assigning a color or character display
- Access and customize online help

You can exercise any of these capabilities by following the procedures described in the *Using MAINVIEW* manual.

---

## Navigation

IPSM groups its views into categories (Workflow views, UOW Elapsed Time views, and so on). You can get an overview of the different categories by glancing through the Contents of this book.

Navigation between views is designed to be *point and shoot*—that is, you can position your cursor on any highlighted field within a view, press Enter, and be taken (by hyperlink) to a new view containing related information.

You can start by displaying one of the IPSM Easy Menus—EZIMS for a single system or EZISSI for multiple systems. Position your cursor on any menu item of interest and press Enter. That takes you to a view displaying the information you desire.

Within the new view that is displayed, you can hyperlink from any row in the far left information column to an Object Easy Menu, which will provide detailed, in-context information about the object (resource, job, or workload) you selected. (You can refer to Chapter 3, “Getting Started with Menus” on page 17, for a complete description of IPSM Easy Menus and Object Easy Menus.)

A second way to navigate is to type the view name on the command line of any view once you are within the IPSM component.

You can also type VIEWS on any command line to access an alphabetical list of all IPSM views. You can type MAIN on any command line to access a functional list of view categories. From the categories, you can hyperlink to the names of the individual views. In either MAIN or VIEWS, you can hyperlink from the listed view name to the actual view.

**Advantage of hyperlinking.** Hyperlinking from one view to another, or from an Object Easy Menu to a related view, has the advantage of keeping a “filter” on the data you are looking at.

For example, if you hyperlink to the Region Occupancy view (IRGOCCR) from the Transaction Class field in the Transaction Queue Status Summary view (ITRSUMR), IRGOCCR view is filtered to show all regions that process the class you selected.

By contrast, if you navigate to IRGOCCR view by typing its name on the command line, you see the unfiltered view—showing all regions, not just the regions processing the class of transaction you are interested in.

**Advantages of typing the view name.** Navigating by typing the view name on the command line has advantages also:

- It is faster and more direct.
- You do not have to remember the navigation path to the data.

As you gain experience, you may want to remember and enter the names of views you use often, and then hyperlink from those views to related views.

If you split your screen into multiple windows (as described in the *Using MAINVIEW* manual), you can see more than one view at the same time. For example, in one window you can see a tabular view and in another window you can see the data displayed as a result of hyperlinking from a specific row within that view.

---

## Key Functions

In the IPSM environment, many key functions are the same as in ISPF. For example, the END, DOWN, UP, LEFT, and RIGHT keys are defined and function in the same way.

The Enter key performs multiple functions. You can use it to refresh data in a view if you have not cursor-selected any field and if you do not have any commands entered. If you have multiple windows open, the data is refreshed in all of them.

You can use the Enter key to execute commands once you have typed them in the primary command field or line command column. If you have multiple windows open, a command is executed only in the window where your cursor was last active.

If you press Enter after cursor-selecting a field with a highlighted header, a hyperlink is executed, taking you to a view containing related information.

If you press Enter after cursor-selecting a field containing summarized data (in a summary view), you are taken to an *expanded* view displaying all the data that was summarized in the first view. Most summary views provide a hyperlink to *expand*, displaying the data that was summarized. Typically, the *expand* is from the count field.

---

## Online Help

The PF1 key allows you to access online help. For information about the view you are in, position your cursor on the view name in the window information line and press PF1. For a description of a particular field within a view, position your cursor on the field, then press PF1.

To see line commands available within a certain view, position your cursor in the line command column (located to the far left in views that support line commands), and then press PF1.

---

## View Naming Conventions

IPSM views follow a simple naming convention. The first character is either the letter *I* (for IPSM, the component name) or the letter *D* (for some DBCTL-specific views). The next several characters are based on the category to which the view belongs (for example, *RGN* for Region views or *DL* for Delay views).

If the letters *DTL* follow the category characters, the view is a detail view. If the letters *SUM* follow the category characters, the view is a summarized view, a tabular view, or both. If the view name ends with the letter *R*, it is usually a realtime view. If it does not, it is usually an interval view.

Easy and Fast Menu views (EZIMS, EZISSI, and EZIFAST), although part of the IPSM component, begin with the letters *EZ*. Easy Menus are a MAINVIEW standard to provide entry points.

---

## Selecting a Starting Point

You can select any of the following starting points for viewing information in IPSM:

- Look at the figures in Chapter 1 to get a visual overview
- Look at the Contents in this book and pick an area of interest
- Look at the view categories in MAIN view, and then hyperlink from a category that interests you to see subcategories and specific views
- Begin by looking at one of the Easy Menus and selecting options from there (see Chapter 3, “Getting Started with Menus” on page 17)

If this is your first experience with IPSM, try using one of the Easy Menus (EZIMS for single-system information or EZISSI for sysplexes) as a point of departure.

If you have previous experience with IMS or know what information you want to see, you might try using the Fast Menu (EZIFAST).

If you are very experienced and already know the views you wish to see, you can go directly to the information by typing the view name on the command line.

---

## Chapter 3. Getting Started with Menus

This chapter describes the basic menus that help you access different views and information within IMSplex System Manager (IPSM).

IPSM runs in the MAINVIEW windows environment. For a full description of how to navigate with menus and views in the MAINVIEW environment, see the *Using MAINVIEW* manual.

To enter the MAINVIEW for DBCTL product, begin at the MAINVIEW Selection Menu (shown in the *Using MAINVIEW* manual). Select either of the following options and press Enter:

- PLEX Management

A list of MAINVIEW products and their associated targets is displayed. Here you can select any active target and press Enter. The DBCTL Easy Menu (EZIMS), shown in Figure 5 on page 18, is displayed.

- IMS

The IMS Solutions menu is displayed. Select the MVIMS option.

The IMS Primary Option Menu for MVIMS services is displayed. Select the PLEX MONITORS option (Option V). The IMS Sysplex Easy Menu (EZISSI), shown in Figure 6 on page 19, is displayed.

**Note:** When you wish to view data for an SSI (single system image) context, use the EZISSI Easy Menu.

---

### DBCTL Easy and Fast Menus

This section describes the DBCTL Easy and Fast Menus. These menus offer easy and quick access to important information. You can select the menu that provides the quickest access to the information you need.

From all of these menus, you can select views, pop-up windows with options related to your selection, or other menus.

- The . character indicates a direct hyperlink to a specific view of IMS performance information.
- The > character indicates a hyperlink to a pop-up window or another menu.
- The \* character indicates an item that is not available because a product is not installed.

For more information about these menus, see the *Using MAINVIEW* manual.

## DBCTL Easy Menu (EZIMS)

The DBCTL Easy Menu (EZIMS) is a good place to start when you want to view system performance information. It provides access to all key IPSM views and menus. Simply select one of the descriptions listed in the different task categories and press Enter. That takes you to the information you want, gathered and presented in a specific view.

Once you become more familiar with IPSM, you can access system performance information using any of the following methods:

- Enter the view name on any command line within IPSM.
- Select a group of views by function from the menu displayed after you select the component from the MAINVIEW Selection Menu or from a PlexManager view.
- Hyperlink from related views.

Each method is described in the *Using MAINVIEW* manual.

```
22MAR2002 14:14:41 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
W1 =EZIMS=====IMS71X==*=====22MAR2002=14:14:41====MVIMS====D====1
                                DBCTL EASY MENU
                                Timeframe - Interval

(Change) Target--> IMS71X                      Status: INACTIVE
Activity          +-----+
. System          | Place cursor on | . Resources
. Threads         | menu item and  | . Programs
. Threads Not Idle| press ENTER   | . Databases
. Thread Occupancy+-----+ . Areas
. Batch Regions
. Database Activity
Transaction Analysis
. Delay Factors
. Components of Response
. Traces
Cross Reference
. Programs/Databases
. Databases/Programs
Exceptions
. Current Delays
. Database Lock Waits
. Waiting Threads
. Stopped Programs
. Stopped Databases
. Stopped Areas
. Alarms in Exception
Monitors
. In Warning
. Active
. Workload Objective
. Area Summary
Tools and Menus
> Utilities
> IMS Fast Menu
> IMS SSI Menu
> MVIMS Main Menu
. Installed Products
. Return
```

Figure 5. DBCTL Easy Menu (EZIMS)

The DBCTL Easy Menu (EZIMS) provides access to system performance information gathered during a time interval. For system performance information in realtime, see the EZIMSR menu (not shown here). You can use the DBCTL Easy Menu (EZIMS or EZIMSR) to

- View system performance information (simply select a category of interest)
- Access other MAINVIEW for DBCTL services
- Select the DBCTL Fast Menu EZIFAST (shown in Figure 7 on page 20)

To display the DBCTL Easy Menu, do one of the following:

- Enter the view name (EZIMS or EZIMSR) on any command line within IPSM and press Enter.
- Enter VIEWS in any command line within IPSM, and then select the view name from the resulting list.

## IMS Sysplex Easy Menu (EZISSI)

The IMS Sysplex Easy Menu (EZISSI), shown in Figure 6, provides options for obtaining performance measurement information about all the IMS systems across your sysplex.

```

22MAR2002 14:15:51 ----- INFORMATION DISPLAY -----
COMMAND ===>
CURR WIN ===> 1          ALT WIN ===>
W1 =EZISSI=====IMS71X==*=====22MAR2002=14:15:51====MVI MS====D====1
                                DBCTL EASY MENU
                                Timeframe - Interval

Activity                       +-----+ Resources
. System                       | Place cursor on | . Programs
. Threads                      | menu item and  | . Databases
. Threads Not Idle             | press ENTER    | . Areas
. Thread Occupancy            +-----+
. Batch Regions
. Database Activity

Transaction Analysis           Cross Reference
. Delay Factors                . Programs/Databases
. Components of Response      . Databases/Programs
. Traces

Exceptions                     Tools and Menus
. Current Delays               > Utilities
. Database Lock Waits          > IMS Easy Menu
. Waiting Threads              > IMS Fast Menu
. Stopped Programs             > MVI MS Main Menu
. Stopped Databases            . Installed Products
. Stopped Areas                . Return...
. Alarms in Exception

```

Figure 6. IMS Sysplex Easy Menu (EZISSI)

Although the options in this menu are specific to the IMS sysplex environment, the menu works just like the other Easy Menus described in this chapter.

To display the EZISSI menu, do one of the following:

- Select Option V (multiple system performance monitoring) from the MAINVIEW Primary Option Menu and press Enter. When you use this method to display EZISSI, the context is automatically set to ALL, which allows you to quickly view sysplex-wide performance and operational data. To view data for a specific target, choose the Select Target/Menu item in the Tools and Menus section of the menu.
- Enter the view name (EZISSI) on any command line within IPSM.
- Enter VIEWS on any command line within IPSM, and then select the view name (EZISSI) from the resulting list.

# DBCTL Fast Menu (EZIFAST)

The DBCTL Fast Menu (EZIFAST), shown in Figure 7, offers menu item categories that link to more detailed information.

```
02/05/2001 14:15:13 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
W1 =EZIFAST=====IMS71X==*=====02/05/2001=14:15:13====MVIMS====D====1

                                DBCTL FAST MENU
                                Timeframe - Interval
                                (Change) Target---> IMS71Y          Status: ACTIVE
                                -----+-----+-----+
                                System                | Place cursor on | Database Activity
                                . DBCTL                | menu item and  | . Overview
                                . Status                | press ENTER   | . Databases
                                . Log Status            |               | . Volumes
                                > IRLM Menu            +-----+-----+ . VSAM Buffer Pools
                                > System Menu          |               | . OSAM Buffer Pools
                                                |               | . Fast Path Buffer Stats
                                Scheduling            |               | Resources
                                . Statistics            | Transaction Summary | . Programs by Status
                                . DMB Utilization        | Database           | . Databases by Status
                                . PSB Utilization        | Volume             | . Areas by Status
                                                | Database Lock      | > Resources Menu
                                                | Latch              |
                                Threads                | Components of Response | Cross Reference
                                . Occupancy              | Transaction Summary | . Programs/Databases
                                . All Threads            | Applications        | . Databases/Programs
                                . Processing             | DLI                 |
                                . Waiting                | Scheduling          |
                                                | DB2                 |
                                Monitors              | Traces                | Tools and Menus
                                . In Warning              | View Traces        | > Utilities
                                . Workload Objective      | Manage Traces      | > IMS Easy Menu
                                . Wait Analysis           |                     | > IMS SSI Menu
                                . Manage                  |                     | > MVIMS Main Menu
                                                |                     | . Installed Products
                                                |                     | . Return...
```

Figure 7. DBCTL Fast Menu (EZIFAST)

To display the DBCTL Fast Menu, do one of the following:

- Enter the view name (EZIFAST) on any command line within IPSM.
- Enter VIEWS on any command line within IPSM, and then select the view name from the resulting list.



---

## DBCTL Object Easy Menus

A DBCTL Object Easy Menu is a menu that is related to a specific object (such as a transaction, database, or program) shown in a view. It provides more detailed information about the object.

To display a DBCTL Object Easy Menu, place your cursor on an object (transaction, database, or program) and press Enter.

For more information about Object Easy Menus and how to access and customize them, see the *Using MAINVIEW* manual.



---

## Part 2. Optimizing System Performance

This part describes how you can use the IPSM views to manage your IMS workflow, analyze transaction response, and determine the causes of transaction delays. For general information about views, see the *Using MAINVIEW* manual.

<b>Chapter 4. Managing IMS Workflow Performance .....</b>	<b>27</b>
Using Workflow Views to Analyze Performance .....	28
Is IMS Resource Usage Too High? .....	30
Can IMS Support Additional Regions/Threads? .....	32
Is OS/390 Affecting IMS Performance? .....	33
Views for Workflow Management – Reference Section .....	35
IMS Activity Views .....	36
DBCCTLGR View – IMS Processing and Resource Usage .....	37
IMS Sysplex Activity Views .....	38
DBCPLXR View – IMS Sysplex Performance .....	39
Region/Thread Occupancy Views .....	40
DRGOCCR View – Region/Thread Occupancy .....	41
 <b>Chapter 5. Controlling UOW Elapsed Time and Transaction Delays .....</b>	 <b>43</b>
Interpreting Data in UOW Elapsed Time and Transaction Delay Analysis Views .....	44
Analyzing UOW Elapsed Time Problems .....	45
Where Are Delays Occurring? .....	45
Viewing Transaction Delays .....	46
Which Events Are Contributing to UOW Elapsed Time? .....	47
Viewing Transaction Processing Events .....	47
Viewing a List of Completed Transaction Traces .....	48
Views for Transaction Delay Analysis .....	51
Transaction Delays .....	52
IDLTR – Transaction Delays .....	53
IDLTRIO – I/O Delays by Transaction .....	54
IDLTRLH – Latch Delays by Latch .....	55
IDLTRLK – Lock Delays by Transaction .....	56
IDLTROU – Other Delays by Transaction .....	57
IDLTRPL – Pool Delays by Transaction .....	58
Database I/O Delays .....	59
IDLDB – I/O Delays by Database .....	59
IDLDBD – Database I/O Delays by Data Set .....	60
IDLDBI – Database I/O Delays by IMS .....	60
IDLDBP – Database I/O Delays by PSB .....	61
IDLDBTR – Database I/O Delays by Transaction .....	61
IDLDBV – Database I/O Delays by Volume .....	62
Data Set I/O Delays .....	63
IDLDD – I/O Delays by Data Set .....	63
IDLDDI – Data Set I/O Delays by IMS .....	64
IDLDDP – Data Set I/O Delays by PSB .....	64
IDLDDTR – Data Set I/O Delays by Transaction .....	65
IDLDDV – Data Set I/O Delays by Volume .....	65

Volume I/O Delays . . . . .	66
IDLVL – I/O Delays by Volume . . . . .	66
IDLVLDB – Volume I/O Delays by Database . . . . .	67
IDLVLDD – Volume I/O Delays by Data Set . . . . .	67
IDLVLI – Volume I/O Delays by IMS . . . . .	68
IDLVLP – Volume I/O Delays by PSB . . . . .	68
IDLVLTR – Volume I/O Delays by Transaction . . . . .	69
Lock Delays . . . . .	70
IDLLK – Lock Delays . . . . .	70
IDLLKI – Lock Delays by IMS . . . . .	71
IDLLKP – Lock Delays by PSB . . . . .	71
IDLLKTR – Lock Delays by Transaction . . . . .	72
Latch Delays . . . . .	73
IDLLH – Latch Delays . . . . .	73
IDLLHI – Latch Delays by IMS . . . . .	74
IDLLHP – Latch Delays by PSB . . . . .	74
IDLLHTR – Latch Delays by Transaction . . . . .	75
Views for UOW Elapsed Time Analysis . . . . .	76
IMS Processing Events . . . . .	77
IFCTR – Processing Events by Transaction . . . . .	78
IFCTRA – Application by Transaction . . . . .	79
IFCTRD – DL/I by Transaction . . . . .	80
IFCTRI – DL/I Calls by Transaction . . . . .	81
IFCTRP – Sync Point by Transaction . . . . .	82
IFCTRR – ROLS by Transaction . . . . .	83
IFCTRS – Scheduling by Transaction . . . . .	84
<b>Chapter 6. Examining a User Application . . . . .</b>	<b>85</b>
Interpreting Data in Transaction Trace Views . . . . .	87
Views for Application Performance Analysis . . . . .	88
Transaction Trace Views . . . . .	88
ITALIST – List of Transaction Trace Data Sets . . . . .	89
ITALISTD – Trace Detail . . . . .	90
ITAQUERY – Select Trace Data . . . . .	91
ITASUM – Trace Entries . . . . .	92
ITASUMZ – Trace Entries Summarized by Transaction . . . . .	93
<b>Chapter 7. Monitoring IMS Workloads and Resources . . . . .</b>	<b>95</b>
IMON – Target Monitor Summary . . . . .	96
ISERV – Active Monitors . . . . .	96
IMAREAZ – Target by Area Monitor Summary . . . . .	97
IMWARN – Monitors in Warning . . . . .	97
MAINVIEW for DBCTL Monitors . . . . .	98
IMS Workload Monitors . . . . .	99
Fast Path Activity . . . . .	99
Global Region Calls . . . . .	100
Elapsed Timing . . . . .	100
IMS Resource Monitors . . . . .	101
IMS Regions/CICS Threads . . . . .	101
IMS Database . . . . .	102
IMS Internals . . . . .	103
IMS Interaction with OS/390 . . . . .	105
IRLM . . . . .	106

<b>Chapter 8. Creating IMS Workload Definitions.....</b>	<b>107</b>
Elements of a Workload Definition .....	107
Workload and Composite Names.....	107
Service-Level Objectives .....	107
Monitoring Time Range .....	107
Target ID and System ID .....	107
Workload Resource Fields .....	107
Planning IMS Workload Definitions .....	108
Establishing Workload Conventions .....	108
Workload Names .....	108
Composite Names .....	108
Defining Workload Service-Level Objectives.....	108
Identifying Critical Workload Monitoring Periods.....	109
Creating a New Workload Definition.....	109
Accessing the IWKLDDEF View .....	109
Opening the Add IMS Workload Definition Dialog Box .....	110
Assigning the New Workload Definition Settings.....	111
Workload and Composite Names.....	111
Target and System IDs .....	111
Description.....	111
Monitored IMS Resources .....	111
Response Time and Percent of Transactions Fields.....	112
Include Queuing .....	112
Saving and Installing a New Workload Definition .....	112
Commands in the IWKLDDEF View and the IMS Workload Definition Dialog Boxes .....	113
Maintaining Workload Definitions .....	114
Changing a Workload Definition.....	114
Deleting and Recovering Workload Definitions .....	115



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## Chapter 4. Managing IMS Workflow Performance

This chapter explains how to use IMSplex System Manager (IPSM) to manage your workflow performance. It begins with a discussion of IPSM workflow views. These views help you answer the following questions:

- Is IMS resource usage too high?
- Can IMS support additional regions/threads?
- Is OS/390 affecting IMS performance?

The second half of this chapter is a reference section (“Views for Workflow Management – Reference Section” on page 35) with a complete listing of IPSM views available to help you manage IMS workflow and transaction processing throughput. Views are grouped by the type of information they provide:

- IMS activity
- IMS sysplex activity
- Region/thread occupancy
- Transaction processing

Each view group contains both summary and detail views. Most views are available in either realtime or interval versions. A sample realtime view from each group is presented and described. (Realtime views show you information from the present time. Interval views show you information gathered over a time period. The time period can be either from current or past time.)

**Note:** Some views are available in either graphical or textual form. The graphical form presents data in bar graphs to give you a quick visual picture. The textual form provides you with additional numerical information.

# Using Workflow Views to Analyze Performance

A good starting point for analyzing your IMS workflow performance is either the IMS Activity view (DBCDTLGR) for a single IMS, or the IMS Sysplex Activity view (DBCPLXGR) for multiple IMS systems.

Both views are available in either bar graph or textual form. (Certain monitor configurations do not support extended attributes required for viewing the bar graph form.) Figure 8 shows the bar graph form of the (single) IMS Activity view (DBCDTLGR).

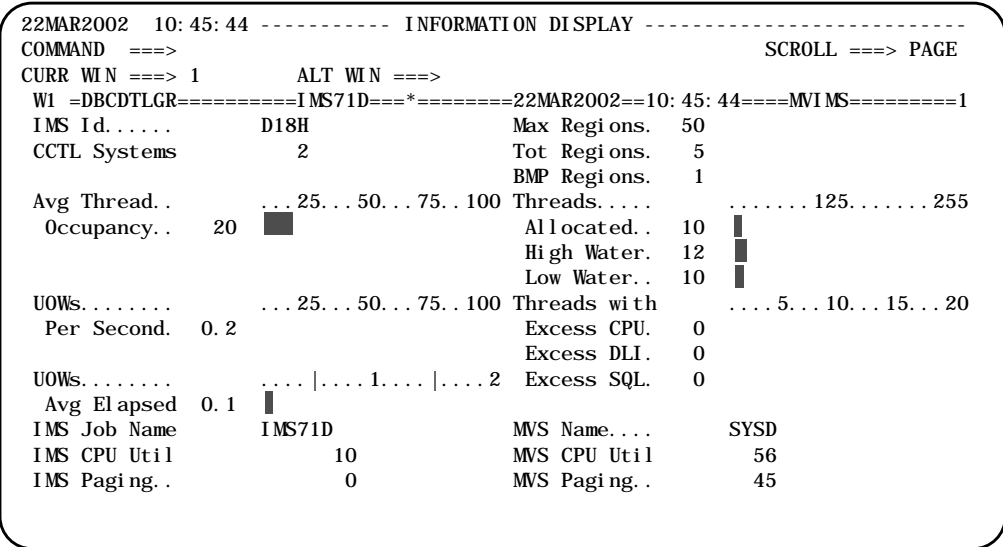


Figure 8. IMS Activity View (DBCDTLGR) - Bar Graph Form

If your monitor does not support the graphical view, DBCDTLGR will appear as shown in Figure 9.

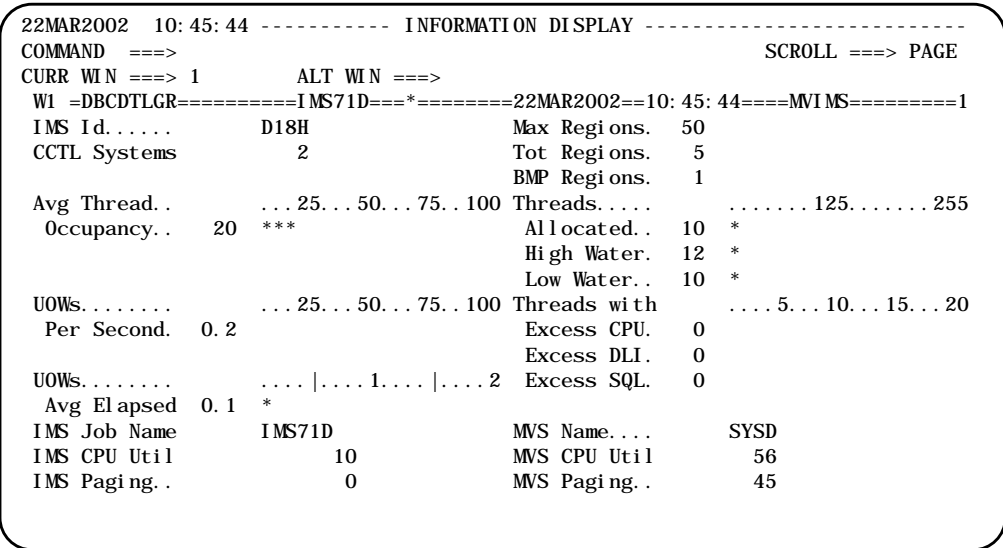


Figure 9. IMS Activity View (DBCDTLGR) - Text Form



To display DBCDTLGR view, type DBCDTLGR on the command line, or type VIEWS and then select DBCDTLGR from the list of views presented. For more information about the view or any of its fields, select the view name (DBCDTLGR) on the window information line or select any field name and then press your help key.

Useful fields in DBCDTLGR view for workflow analysis are

- Avg Thread Occupancy
- UOWs Per Second
- UOWs Avg Elapsed
- IMS CPU Util
- IMS Paging
- BMP Regions
- Threads Allocated, High Water, Low Water
- Threads with Excess CPU, DLI, or SQL
- Max Threads/Regions

You can hyperlink from any of these fields to other views that contain related information. By means of this dynamic view interaction, you can isolate and identify potential problems. The following pages show you how to use these views to answer typical workflow management questions.

# Is IMS Resource Usage Too High?

To analyze whether your IMS resource usage is too high, begin by looking at relevant fields in DBCDTLGR view and then check DRGOCCR view, as illustrated in Figure 10.

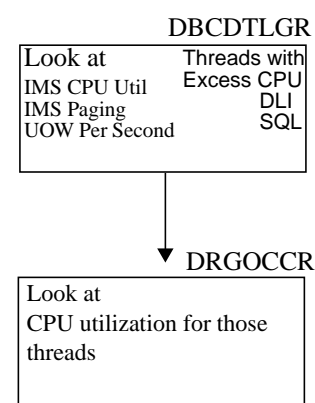


Figure 10. Views for Checking IMS Resource Usage

The relevant fields in DBCDTLGR view are the IMS CPU Util, IMS Paging, and Threads with Excess CPU, DLI, and SQL fields.






22MAR2002 10: 45: 44 ----- INFORMATION DISPLAY -----			
COMMAND ==>		SCROLL ==> PAGE	
CURR WIN ==> 1		ALT WIN ==>	
W1 =DBCDTLGR=====IMS71D==*=====22MAR2002==10: 45: 44====MVIMS=====1			
IMS Id.....	D18H	Max Regi ons.	50
CCTL Systems	2	Tot Regi ons.	5
		BMP Regi ons.	1
Avg Thread..	... 25... 50... 75... 100	Threads....	..... 125..... 255
Occupancy..	20 	Allocated..	10 
		High Water.	12 
		Low Water..	10 
UOWs.....	... 25... 50... 75... 100	Threads with	.... 5... 10... 15... 20
Per Second.	0. 2	Excess CPU.	0
		Excess DLI.	0
		Excess SQL.	0
UOWs.....	....  .... 1....  .... 2		
Avg El apsed	0. 1 		
IMS Job Name	IMS71D	MVS Name....	SYSD
IMS CPU Util	10	MVS CPU Util	56
IMS Pagi ng..	0	MVS Pagi ng..	45

Figure 11. Fields for Checking IMS Resource Usage (DBCDTLGR View)

If a value in one of these fields is unusual or above normal, determine if the abnormality is due to any of the following reasons:

- A heavier workflow  
(Check the UOWs Per Second field in DBCDTLGR view.)
- Mix of BMPs to DBTs  
(See DRGOCCR view.)
- Changes in the applications themselves

To see more detailed information about the work being performed and the resources being used by an IMS, display the IMS Activity Detail view (DBCDTLR), shown in Figure 12. To display the view, type DBCDTLR on the command line, or type VIEWS and then select DBCDTLR from the resulting list of views.

```

22MAR2002 08:53:26 ----- INFORMATION DISPLAY -----
COMMAND ===>
CURR WIN ===> 1      ALT WIN ===>
W1 =DBCDTLR=====IMS71D==*=====22MAR2002==08:53:26====MVIS=====1
IMS Id.....      D18H CPU Utilization      AVG UOW Duration 0.500
IMS Job Name..  IMS71D  MVS System...      87      UOWs per second.      5
MVS Name.....      SYSD  IMS System...      50
Batch Regions.      1      Control Rgn.      20
DBCTL Threads.      3      DLI SAS Rgn.      20
  High Number.      9      BMP Rgns....      5
  Low number..      3      DBRC Rgn.....      0
Avg Thread Occ      33      IRLM Rgn.....      5

```

Figure 12. IMS Activity Detail View (DBCDTLR)

DBCDTLR view shows how your critical resources are being used by IMS. For a complete description of what any field shows, position the cursor on that field, and then press the help key.

# Can IMS Support Additional Regions/Threads?

To see if IMS can support additional regions/threads, check the Max Regions and Threads Allocated fields in DBCDTLGR view, shown in Figure 13.

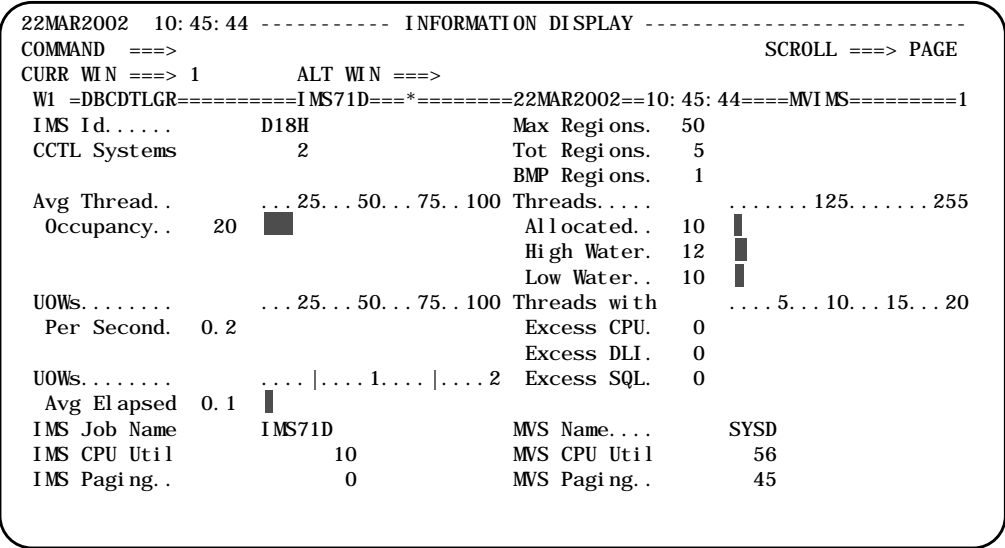


Figure 13. Fields for Checking IMS Ability to Support Additional Regions/Threads

If the value shown in the Max Regions field is greater than the value shown in the Threads Allocated field, IMS can support additional regions/threads for processing.

## Is OS/390 Affecting IMS Performance?

If you have MAINVIEW for IMS installed, you can hyperlink from DBCDTLGR to OS/390 views that show you how OS/390 is affecting IMS performance. See Figure 14 for a visual overview.

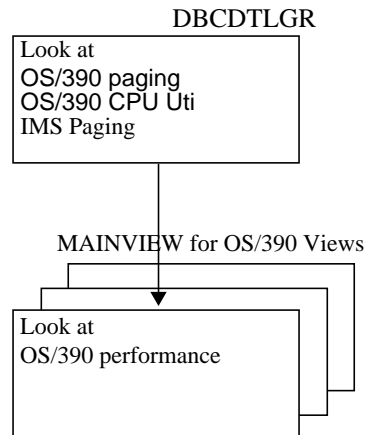


Figure 14. Views for Checking Effect of OS/390 Performance

The following fields in DBCDTLGR view are your starting points for checking to see if OS/390 is affecting performance.

- **MVS Paging**  
Shows the number of page-ins and page-outs for the OS/390 where IMS is running.
- **MVS CPU Util**  
Shows the percentage of CPU used by OS/390.
- **IMS Paging**  
Shows the number of page-ins and page-outs for that IMS.

These three fields are shown in Figure 15 on page 34.

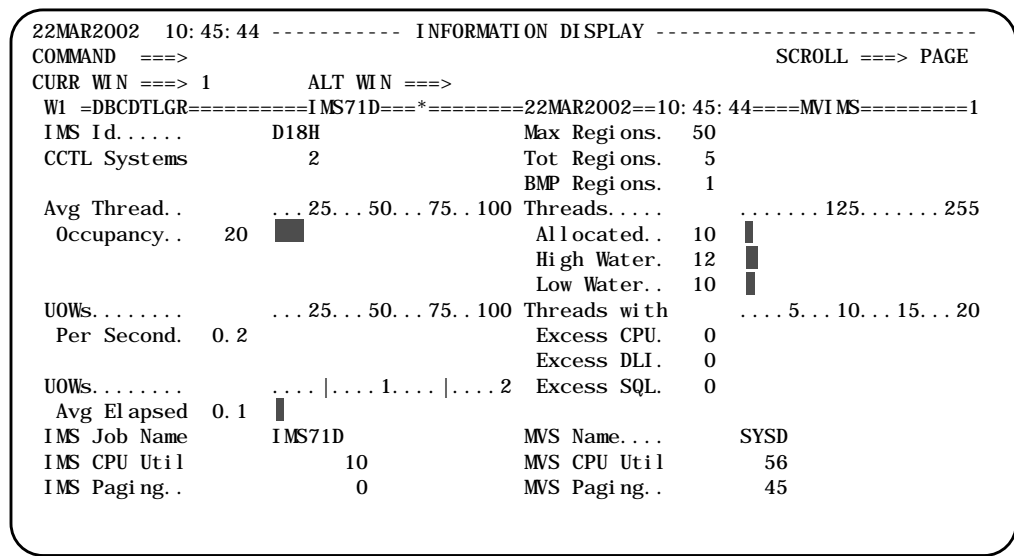


Figure 15. Fields for Checking OS/390 Processing

For more information about how to use OS/390 views, see the *MAINVIEW for OS/390 User Guide and Reference*.

---

## Views for Workflow Management – Reference Section

This section lists all the IPSM views available to help you manage your IMS workflow. The views are grouped into categories, which are presented in alphabetical order:

- IMS Activity
- IMS sysplex activity
- Region/thread occupancy

Each view category contains several different views. Their basic function is the same, with variations reflecting whether the data displayed is realtime or interval.

You can change the presentation of each view by context, scope, or filters. To see which of these apply to a particular view, refer to the online help. (For online help, position the cursor on the view name in the window information line, and then press the help key.) In some views you can take actions to make dynamic system changes. These actions are described in the online view help.

To meet your site's needs, you may wish to customize views and create screens made up of several views. See the *Using MAINVIEW* manual for a description of how to do this.

In the following pages, each section contains a table showing all views available for that view category. A sample realtime view follows the table, along with a brief description of what the view does. For more detailed information about the views or any of their fields, refer to the online help.

## IMS Activity Views

This section describes the IMS activity views available to help you manage your IMS workflow. These views provide IMS system information, showing you resource usage and workflow performance for a single IMS.

Table 1 lists all available IMS activity views. The views are similar except for the time period that samples are taken. (Views with names ending in R present realtime data; the other views present data collected during a specific time interval.)

Table 1. IMS Activity Views

View description	Name	Type
IMS processing and resource usage (graph view)	DBCCTLGR	Realtime detailed statistics about IMS performance
	DBCCTLG	Interval statistics
IMS processing and resource usage (text view)	DBCCTLR	Realtime detailed statistics about IMS performance
	DBCCTL	Interval statistics

All views are described in the online view help. To see online view help, do one of the following:

- Position the cursor on the view name on the window information line and press the help key.
- Enter HELP and the name of the view on the command line.



## DBCDTLGR View – IMS Processing and Resource Usage

The view shown in Figure 16 is an example of a realtime IMS Activity view. This view and the others in this group can help you determine if IMS is meeting its performance objectives. It shows you how critical resources, including application region processing, are being used by IMS.

The UOWs Per Second and UOWs Avg Elapsed fields are indicators of whether IMS is meeting general throughput and response time objectives.

If IMS is not meeting its objectives, you can check the OS/390 fields for indications of system resource competition.

```

22MAR2002 10: 45: 44 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1 ALT WIN ==>
W1 =DBCDTLGR=====IMS71D==*=====22MAR2002==10: 45: 44====MVI MS=====1
IMS Id. .... D18H Max Regions. 50
CCTL Systems 2 Tot Regions. 5
BMP Regions. 1
Avg Thread.. ... 25... 50... 75... 100 Threads.... ..... 125..... 255
Occupancy.. 20 ██████████ Allocated.. 10 ██████████
High Water. 12 ██████████
Low Water.. 10 ██████████
UOWs. .... ... 25... 50... 75... 100 Threads with .... 5... 10... 15... 20
Per Second. 0.2 Excess CPU. 0
Excess DLI. 0
UOWs. .... .... |.... 1.... |.... 2 Excess SQL. 0
Avg Elapsed 0.1 ██████████
IMS Job Name IMS71D MVS Name.... SYSD
IMS CPU Util 10 MVS CPU Util 56
IMS Pagi ng. . 0 MVS Pagi ng. . 45

```

Figure 16. DBCDTLGR — Sample IMS Activity View

To display this view, type DBCDTLGR on any command line within IPSM or type VIEWS on any command line and then select the view name from the resulting list of views.

If a field name or value is highlighted within the view, you can hyperlink from that field to another view containing more information.

## IMS Sysplex Activity Views

This section describes the IMS sysplex activity views available to help you manage your IMS workflow. These views show how well each IMS in the sysplex is processing its workflow and how much of your resources are being used by each IMS across a sysplex.

Table 2 lists all available IMS sysplex activity views. The views are similar except for the time period that samples are taken. (Views with names ending in R present realtime data; the other views present data collected during a specific time interval.)

Table 2. IMS Sysplex Activity Views

View description	Name	Type
Sysplex performance by IMS	DBCPLXR	Realtime performance statistics for each IMS in the sysplex
	DBCPLX	Interval statistics
	DBCPLXGR	Realtime graph
	DBCPLXG	Interval graph
Sysplex performance by data sharing group	DBCPLSR	Realtime performance statistics for IMS data sharing groups
	DBCPLS	Interval statistics
	DBCPLSGR	Realtime graph
	DBCPLSG	Interval graph
Sysplex performance by OS/390	DBCPLMR	Realtime performance statistics for IMS system group by OS/390 system
	DBCPLM	Interval statistics
	DBCPLMG R	Realtime graph
	DBCPLMG	Interval graph

All views are described in the online view help. To see online view help, do one of the following:

- Position the cursor on the view name on the window information line and press the help key.
- Type HELP and the name of the view on the command line and press Enter.

# DBCPLXR View – IMS Sysplex Performance

The view shown in Figure 17 is an example of a realtime IMS Sysplex Activity view. This view and the others in this group can help you analyze IMS performance across a sysplex. Resource statistics, such as CPU utilization, are aggregated for each IMS. Throughput statistics are for the entire workflow serviced by an IMS. These statistics represent IMS sysplex performance and service levels.

22MAR2002 11: 46: 06 ----- INFORMATION DISPLAY -----

COMMAND ==>>SCROLL ==> PAGE

CURR WIN ==> 1ALT WIN ==>

W1 =DBCPLXR=====IMS71D==\*=====22MAR2002==11: 46: 05====MVIMS=====1

IMS	Intvl	IMS	MVS	IMS	MVS	IMS	MVS	Num	Thrd	UOW	UOW	Num
ID	Time-	Job	Name	CPU%	CPU%	Page	Page	Thrds	Occ	AVG	Rate	BMPs
D19H	11: 46	IMS71Y	SYSC	0	78	0	0	3	33	0.00	0.0	0
D15H	11: 46	IMS71D	SYSC	0	56	0	1	3	33	0.00	0.0	0
X18H	11: 46	IMS71X	SYSD	0	31	0	0	0	0	0.00	0.0	0

Figure 17. DBCPLXR — Sample IMS Sysplex Activity View

To display this view, type DBCPLXR on any command line within IPSM, or type VIEWS on any command line, and then select the view name from the list of views presented.

If a field name or value is highlighted within the view, you can hyperlink from that field to another view containing more information.

## Region/Thread Occupancy Views

This section describes the Region/Thread Occupancy views available to help you manage your IMS workflow. These views show BMP and thread processing and resource usage. They show how busy a region/thread is, as well as transaction processing rate. Regions/threads can be viewed for a single IMS, OS/390, a data sharing group, or across any grouping you choose.

Table 3 lists all available Region/Thread Occupancy views. The views are similar except for the time period that samples are taken. (Views with names ending in R present realtime data; the other views present data collected during a specific time interval.)

Table 3. Region/Thread Occupancy Views

View description	Name	Type
Region/thread occupancy	DRGOCCR	Realtime statistics for region/thread occupancy
	DRGOCC	Interval statistics
	DRGOCCGR	Realtime graph
	DRGOCCG	Interval graph
Region/thread processing summary	DRGOVWR	Realtime summary of region processing statistics
	DRGOVW	Interval summary
CCTL connections	DRGCCTL	Interval statistics for CCTL connections to IMS systems

All views are described in the online view help. To see online view help, do one of the following:

- Position the cursor on the view name on the window information line, and then press the help key.
- Type **HELP** and the name of the view on the command line, and then press Enter.

# DRGOCCR View – Region/Thread Occupancy

The view shown in Figure 18 is an example of a realtime Region/Thread Occupancy view. This view and the others in this group show BMP and thread processing, as well as resource usage.

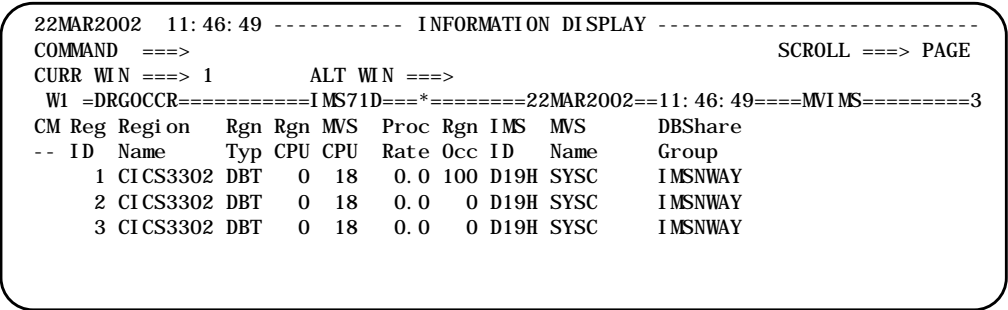


Figure 18. DRGOCCR — Sample Region/Thread Occupancy View

To display this view, type DRGOCCR on any command line within IPSM, or type VIEWS on any command line, and then select the view name from the list of views presented.

If a field name or value is highlighted within the view, you can hyperlink from that field to another view containing more information.



---

## Chapter 5. Controlling UOW Elapsed Time and Transaction Delays

This chapter shows you how to use the IPSM components of response time (CORT) views to analyze and control unit of work (UOW) elapsed time and transaction delays. Then it describes how to use IPSM UOW Elapsed Time and Transaction Delay Analysis views to answer the following questions:

- Where are delays occurring?
- Which events are contributing to elapsed time?

IPSM provides elapsed time analysis views about units of work from IMS transactions that have completed or are in progress. These views help you quickly identify why elapsed time is not meeting your expectations—so you can improve it.

You can use these views to see

- Processing delays incurred by a unit of work when it tries to obtain a resource
- The resource associated with the delay
- IMS processing events occurring as units of work flow through the system (so you can see events that contribute to unit of work elapsed time)

IPSM also helps you analyze why a MAINVIEW VistaPoint workload is not meeting its objective. It allows you to view unit of work processing delays and events within a workload.

The information in IPSM views is hierarchical. Lower-level views give further, more detailed information related to the information shown at a higher level.

---

## Interpreting Data in UOW Elapsed Time and Transaction Delay Analysis Views

The following points should be kept in mind when interpreting values reported in MAINVIEW for DBCTL UOW elapsed time and transaction delay analysis views:

- MAINVIEW for DBCTL (MVDBC) reports on the IMS activity incurred during the processing of CICS transactions requiring DL/I resources. It does not report on CICS activity overall. Therefore, for DBCTL threads, fields whose headers refer to response time are actually reporting elapsed time of the DL/I thread activity for a unit of work—not response time for the CICS transaction.

In interpreting values shown in the Elapsed Time fields, keep in mind that the CICS transaction may be made up of multiple DL/I units of work. In most cases, a CICS transaction is a single unit of work. However, it is possible for a CICS transaction to commit resources (completing the current UOW and beginning the next logical UOW) as part of the processing of a single CICS transaction. This is analogous to a BMP issuing checkpoint calls.

- MVDBC reports only activity that is a part of the IMS DBCTL. An application may have performed DB2 work, but not as part of its DBCTL thread activity. Therefore, this activity is not reported by MVDBC.

For information related to the total transaction execution, refer to data collected in views in the MAINVIEW for CICS product.

**Note:** MVDBC UOW Elapsed Time and Transaction Delay Analysis views present the most complete and meaningful information in target mode rather than SSI mode.



## Analyzing UOW Elapsed Time Problems

You can use DBCDTLGR view to investigate unit of work (UOW) elapsed time problems. From DBCDTLGR view, you can hyperlink to other views that show transaction delays, processing events, or a trace of transaction occurrences.

To investigate lengthy elapsed time, you might start with the following views:

- IDLTR view - IMS delays by transaction

This view shows the major causes of delays for all IMS transactions or by workload. It identifies a delay when a transaction is waiting for a resource, and it provides a hyperlink to related views showing more detailed information.

- IFCTR view - IMS processing events by transaction

This view shows the major transaction flow components that affect elapsed time for all IMS transactions or a workload. From here you can hyperlink to other views to get more information about where transactions are spending their time.

## Where Are Delays Occurring?

If the value in the UOWs Avg Elapsed field is high in DBCDTLGR view, as shown in Figure 19, it could be because a transaction is waiting for a resource.

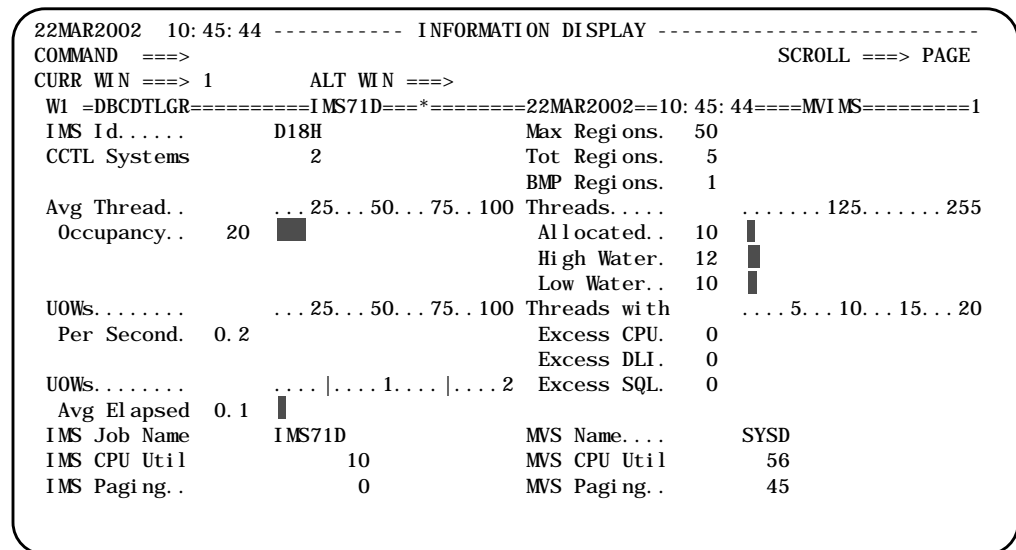


Figure 19. Field for Looking for Transaction Delays

If the value in UOWs Avg Elapsed is high, select this field and hyperlink from it to IDLTR view. IDLTR shows you the delays contributing to unit of work elapsed time. (This path of investigation is shown in Figure 20 on page 46.)

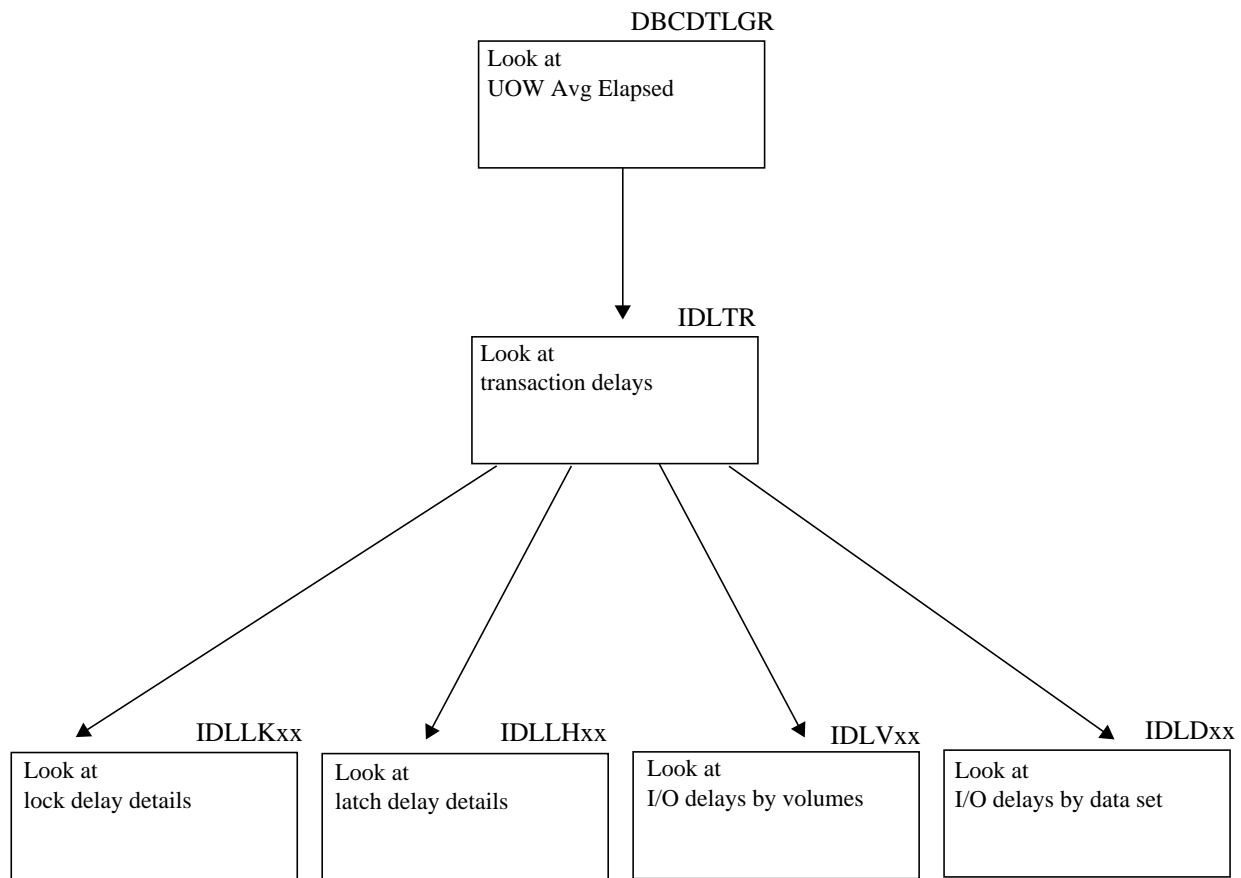


Figure 20. Views for Determining Where Delays Are Occurring

## Viewing Transaction Delays

You can use the IDLTR view, shown in Figure 21 on page 47, to

- Quickly classify whether delays are caused by thread availability waits or processing delays
- Identify whether eliminating any of the delay factors would decrease unit of work elapsed time to the level you want
- Hyperlink to see delay details about
  - Locks
  - Latches
  - I/O
  - Pools
  - Other kinds of delays

to look for possible causes.

22MAR2002 10: 47: 59 ----- INFORMATION DISPLAY -----													
COMMAND ==>							SCROLL ==> CSR						
CURR WIN ==> 1				ALT WIN ==>									
>WI =IDLTR=====IMS71D==*=====22MAR2002==10: 16: 56====MVI MS=====1													
CMD	Trancode	Intvl	IMS	Avg	Resp	%Inp	%CPU	%CPU	%I/O	%Lck	%Lth	%Pol	%Ot
---	-----	Time-	ID	0...	.....3	Que	Act	Dly	Dly	Dly	Dly	Dly	DI
DLZZ	10: 16	D19H	3. 91	*****	+	n/a	18		9	5	0	1	2
THI SMI NQ	10: 16	D19H	1. 47	*****		n/a	9	6	25	26	1	0	2
THDAMI NQ	10: 16	D19H	0. 21	**		n/a	9	39	13		0		2
THI DMI NQ	10: 16	D19H	0. 10	*		n/a	28	17	3	9	1		2

Figure 21. IDLTR View

IDLTR view shows all transactions processed. For each transaction processed, you can see how much elapsed execution time contributed to a transaction’s response. If a delay field is highlighted, you can hyperlink from it to a more detailed view about that delay. For a detailed description of this view, see “IDLTR – Transaction Delays” on page 53.

## Which Events Are Contributing to UOW Elapsed Time?

In addition to looking for delays when DBCDTLGR shows a high UOW average elapsed time, you can also look for transaction processing events that are contributing the most to elapsed time. Proceed from DBCDTLGR to IFCTR view, as shown in Figure 22.

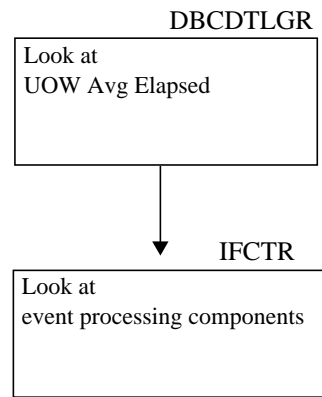


Figure 22. Views for Evaluating Transaction Processing Events

## Viewing Transaction Processing Events

To display a view of processing events for all transactions, enter IFCTR on the command line, or type VIEWS on the command line and then select IFCTR from the resulting list of views. A third alternative is to display IFCTR view by selecting the Tran Performance option from the DBCTL Easy or Fast Menu.

```

22MAR2002 10: 44: 43 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IFCTR=====IMS71D==*=====22MAR2002==10: 16: 56====MVI MS=====1
CMD Trancode Intvl IMS Avg      Avg %InputQ      Avg %El apse      Avg % Avg %
--- -- -- -- -- Time- ID  Resp  0. . . . . 50. . . 100  0. . . . . 50. . . 100 Appl  DLI
      DLZZ      10: 16 D19H  3. 91 n/a          100 ***** 24 17
      DLZZ2     10: 16 D19H  3. 43 n/a          100 ***** 47 13
      DLZZ3     10: 16 D19H  3. 24 n/a          100 ***** 32 11
      DLZZ      10: 16 D19H  3. 91 n/a          100 ***** 24 17

```

Figure 23. IFCTR View

You can use this view to

- Identify IMS processing events contributing to unit of work elapsed time
- Hyperlink from highlighted fields to details about the events that occurred to determine the major contributors to elapsed time

For example, if Avg DLI is high, you can hyperlink from this field to view DL/I execution events to determine the cause of the long execution.

For more information about these kinds of views, see “Views for Transaction Delay Analysis” on page 51.

## Viewing a List of Completed Transaction Traces

You can view a list of completed transaction traces for

- A transaction displayed in the IFCTR view
- Any abnormal indicator displayed in the DBCDTLGR view, shown in Figure 24.

```

22MAR2002 10: 45: 44 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
W1 =DBCDTLGR=====IMS71D==*=====22MAR2002==10: 45: 44====MVI MS=====1
IMS Id. . . . . D18H          Max Regions. 50
CCTL Systems      2          Tot Regions. 5
                        BMP Regions. 1
Avg Thread. . . . . 25. . . 50. . . 75. . 100 Threads. . . . . 125. . . . . 255
Occupancy. . . 20 ██████████ Allocated. . 10 ██████████
                        High Water. 12 ██████████
                        Low Water. . 10 ██████████
UOWs. . . . . 25. . . 50. . . 75. . 100 Threads with
Per Second. 0. 2          Excess CPU. 0
                        Excess DLI. 0
UOWs. . . . . 1. . . . 1. . . . 2 Excess SQL. 0
Avg Elapsed 0. 1 ██████████
IMS Job Name IMS71D          MVS Name. . . . . SYS
IMS CPU Util 10          MVS CPU Util 56
IMS Paging. . 0          MVS Paging. . 45

```

Figure 24. Checking Fields to Look for Abnormal Indicator

You can also view a list of completed transaction traces recorded in historical trace log data sets. You can do this by invoking ITALIST view from either IFCTR or DBCDTLGR view. These two alternative paths for arriving at ITALIST view are shown in Figure 25.

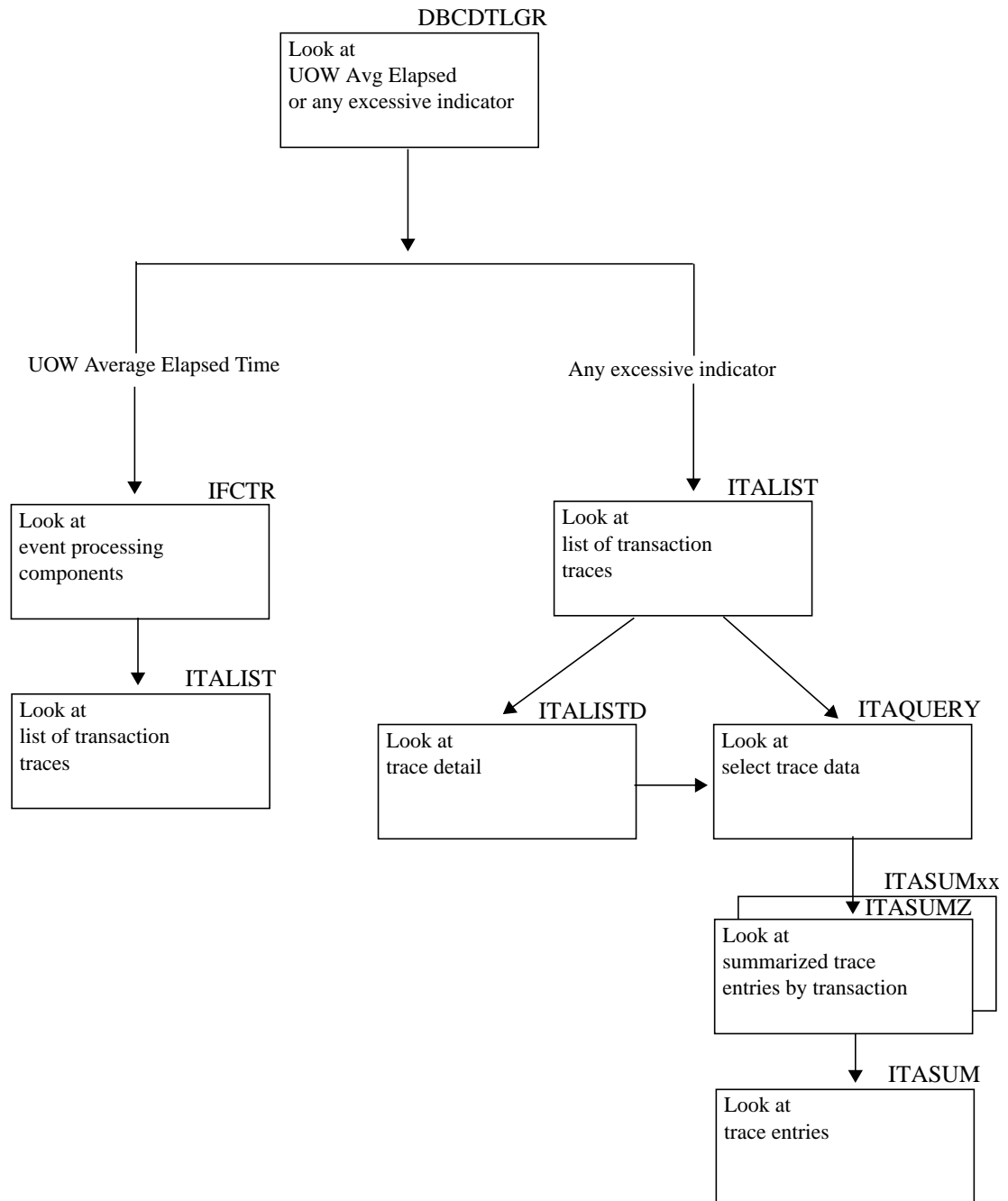


Figure 25. Views for Checking Completed Transaction Traces

ITALIST, shown in Figure 26, is also available as a menu option in the IMS Easy Menu (EZIMS).

```

22MAR2002 07:39:52 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>WI =ITALIST=====IMS71Y==*=====22MAR2002==07:21:40====MVIMS=====5

```

	End				Nbr of	Trce	Target	Dsn
-	End Date	Time	Trace Id	Trace Title	Trans	Type	Jobname	Id
	21MAY2002	12:09	ABR3	ABREVIATED TRACE	25032	Abr	IMS71Y	32
	21MAY2002	15:51	ABR3	ABREVIATED TRACE	15541	Abr	IMS71Y	31
	21MAY2002	10:26	DETAIL	DETAIL WORKLOAD TRACE	2264	Det	IMS71Y	18
	21MAY2002	15:34	DETAIL	DETAIL TRACE	1586	Det	IMS71Y	22
	20JUN2002	09:48	SUMMARY	WORKLOAD TRACE	6053	Sum	IMS71Y	8

Figure 26. ITALIST View

This group of views helps you analyze transaction performance. You can use it to obtain more information for further analysis by hyperlinking from it to

- An expanded view for more details about the transactions recorded in the trace
- A trace query view where you can formulate a query request to see only specific data that you want

For more information about tracing transactions, see Chapter 6, “Examining a User Application” on page 85.

---

## Views for Transaction Delay Analysis

This section lists all the views available to help you manage transaction elapsed time. The views are grouped into the following categories:

- Transaction Delays
- Database I/O Delays
- Data set I/O Delays
- Volume I/O Delays
- Lock Delays
- Latch Delays

Measured data is presented by these views in textual and/or graphical form. Scrolling right presents more data for that view. You can restrict view presentation by context, scope, or filters. (To see which restriction categories apply for a view, select the view name on the window information line inside the view, and then press the help key.)

To analyze transaction delays, start your analysis with IDLTR view. This view shows all transactions and allows you to see the delays that contributed to each transaction's elapsed time. If a transaction shows an unusual elapsed time, select the transaction and hyperlink from it to an Easy Menu. The Easy Menu provides you with the following view options:

- Transaction delays (see Table 4 on page 52)
- Database I/O delays by transaction, PSB, IMS, volume, or data set (see Table 5 on page 59)
- Data set I/O delays by transaction, PSB, IMS, or volume (see Table 6 on page 63)
- Volume I/O delays by transaction, PSB, or IMS (see Table 7 on page 66)
- Pool delays (see page 58)
- Lock delays by transaction, PSB, IMS, or data set (see Table 8 on page 70)
- Latch delays by transaction, PSB, or IMS (see Table 9 on page 73)
- Other kinds of delays (see page 57)

As described in the *Using MAINVIEW* manual, you can customize views and create screens that include several views to meet your site's needs.

The information presented in these views correlates event and sample data. The accuracy of the statistical analysis depends upon the number of observations made. In all these views, a Confidence Level column is included to reflect the accuracy of the analysis. If information shows a confidence level of None, do not spend time analyzing that information.

## Transaction Delays

Table 4 lists all the views available for transaction delays. Descriptions of each view follow on the referenced pages.

Table 4. Transaction Delay Views

View	Name
Major transaction delays	IDLTR (see page 53)
I/O delays	IDLTRIO (see page 54)
Latch delays	IDLTRLH (see page 55)
Lock delays	IDLTRLK (see page 56)
Other kinds of delays	IDLTR0T (see page 57)
Pool delays	IDLTRPL (see page 58)



## IDLTR – Transaction Delays

```

22MAR2002 10: 47: 59 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IDLTR=====IMS71D=====22MAR2002==10: 16: 56====MVI MS=====1
CMD Trancode Intvl IMS      Avg Resp   %Inp %CPU %CPU %I/O %Lck %Lth %Pol %Ot
--- ----- Time- ID      0...+....3  Que  Act   Dly  Dly  Dly  Dly  Dly  Dl
          DLZZ  10: 16 D19H  3. 91  *****+  n/a  18    9    5    0    1    2
          THISMI NQ 10: 16 D19H  1. 47  *****  n/a   9    6   25   26    1    0    2
          THDAMI NQ 10: 16 D19H  0. 21  **        n/a   9   39   13    0    0    2
          THIDMI NQ 10: 16 D19H  0. 10  *         n/a  28   17    3    9    1    2

```

Figure 27. IDLTR View

You can access IDLTR view by

- Hyperlinking from the UOWs Avg Elapsed field in DBCDTLGR view
- Typing IDLTR on the command line
- Selecting the name from a list of views with the VIEWS command

A highlighted field column header indicates you can select the field to hyperlink to a more detailed view.

The Avg Resp field shows the average amount of time that units of work associated with each trancode spent in execution. This allows you to quickly determine whether there is a problem occurring in a processing event. The other columns break down the delays that occurred. A high percentage shown by any of these indicates where a potential problem could exist. For example, if the I/O delay percentage is high, the transaction may be waiting for a device. Hyperlinking from %I/O Dly provides a more detailed view of I/O delays to help you determine potential causes.

Hyperlinking from a field in the first column of the IDLTR view presents a menu. This menu serves as a platform to obtain more detailed information about the delays contributing to elapsed time for the scheduled transaction.

For online help, position the cursor on the name of the view or any field, and then press the help key.

# IDLTRIO – I/O Delays by Transaction

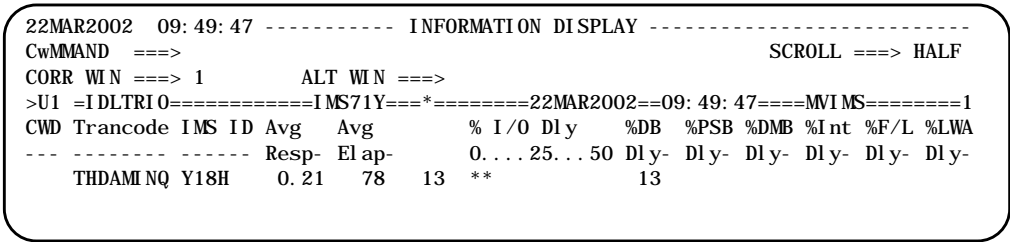


Figure 28. IDLTRIO View

You can access IDLTRIO view to see I/O event contributors to transaction elapsed time by hyperlinking from a

- % I/O Dly field in the IDLTR view of transaction delays
- Transaction code in the Trancode column of the IDLTR view of transaction delays, and then selecting the I/O delays option from a menu

This view shows, for each transaction processed, what percentage of elapsed time an I/O event contributed to a transaction’s response. It identifies any I/O activity delays that occurred for

- Database reads and writes
- PSB reads for programs
- DMB reads for a database
- Intent list reads for a program
- Program fetch
- Log Write Ahead calls

Hyperlinking from %DB Dly provides more details about database delays. Hyperlinking from a field in the first column of the IDLTRIO view presents a menu. This menu serves as a platform to obtain more detailed information about the delays contributing to elapsed time.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLTRLH – Latch Delays by Latch

22MAR2002 11:35:13 ----- INFORMATION DISPLAY -----									
COMMAND ==>					SCROLL ==> CSR				
CURR WIN ==> 1					ALT WIN ==>				
>WI =IDLTRLH=====IMS71Y==*=====22MAR2002==11:35:12====MVI MS=====1									
CMD	Trancode	IMS	Latch ID	Avg % Dly	Min	Max	Confidence	PSBName	
---	-----	ID	-----	0. .... 5. .... 10	%Dly	%Dly	Level	-----	
	THIDMINQ	X18H	<MISC. .>	1 *		1	1	None	PHIDMINQ

Figure 29. IDLTRLH View

You can access IDLTRLH view by hyperlinking from the

- %Lth Dly field in the IDLTR view of transaction delays
- Trancode field in the IDLLHTR view of latch delays by transaction to see what latch delays contributed to elapsed time.

This view shows the transactions being delayed by latch waits and the effect each latch has on elapsed time. Hyperlinking from a field in the first column of this view presents a menu. You can use this menu to obtain more detailed information about latch delays.

For more information, you can position the cursor on any field in this view, and then press the help key.

# IDLTRLK – Lock Delays by Transaction

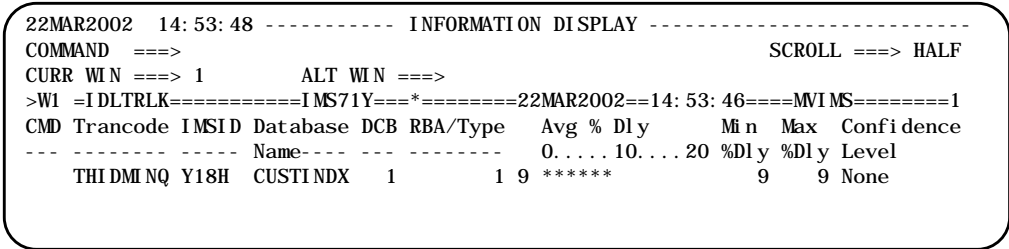


Figure 30. IDLTRLK View

You can access IDLTRLK view by hyperlinking from the % Lck Dly field in the IDLTR view of transaction delays to see which lock delays contributed to elapsed time.

This view shows the transactions being delayed by lock waits and the effect each resource has on elapsed time. Hyperlinking from a field in the first column of this view presents a menu. You can use this menu to obtain more detailed information about lock delays.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLTR0T – Other Delays by Transaction

```
22MAR2002 10:43:28 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>WI =IDLTR0T=====IMS71Y==*=====22MAR2002==10:43:27====MVI MS=====1
CMD Trancode IMS ID Avg % % Other Dly DBIn Mi sc DynA IRLM DBRC DB2
--- ----- Resp- Elap 0...25...50 Dly- Dly- Dly- Dly- Dly- Dly-
      THIDMINQ X18H 0.10 54 21 **** 14
```

Figure 31. IDLTR0T View

You can access IDLTR0T view by hyperlinking from the % Oth Dly field in the IDLTR view of transaction delays to see the effect on elapsed time caused by delays other than those due to I/O activity, pool, latch, or lock waits.

IDLTR0T identifies any delays that occurred for

- Database intent, allocation, open, and recovery control
- IRLM
- Command execution
- AO requests
- Fast Path
- Log buffer

Hyperlinking from a field in the first column of this view presents a menu. You can use this menu to obtain more detailed information about transaction delays and response.

For more information, you can position the cursor on any field in this view, and then press the help key.

# IDLTRPL – Pool Delays by Transaction

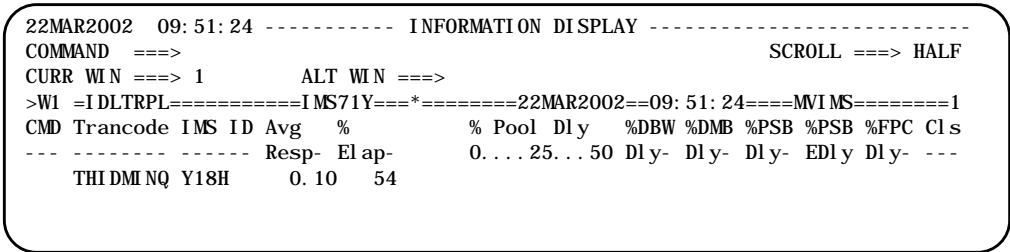


Figure 32. IDLTRPL View

You can access IDLTRPL view by hyperlinking from the %Pool Dly field in the IDLTR view of transaction delays to see which pool delays contributed to elapsed time.

This view shows, for each transaction processed, what percentage of elapsed time a storage wait for a pool contributed to a transaction’s response. It identifies any delays that occurred for the following pool storage:

- DBWP
- DMBP
- PSB
- Extended private area of a PSB pool
- FPCB

Hyperlinking from a field in the first column of this view presents a menu. You can use this menu to obtain more detailed information about pool delays.

For more information, you can position the cursor on any field in this view, and then press the help key.

## Database I/O Delays

Table 5 lists all the views available for database I/O delays. Descriptions of each view follow on the referenced pages.

Table 5. Database I/O Delay Views

View	Name
I/O delays by database	IDLDB (see page 59)
Database I/O delays by data set	IDLDBD (see page 60)
Database I/O delays by IMS	IDLDBI (see page 60)
Database I/O delays by PSB	IDLDBP (see page 61)
Database I/O delays by transaction	IDLDBTR (see page 61)
Database I/O delays by volume	IDLDBV (see page 62)

### IDLDB – I/O Delays by Database

```

22MAR2002 09: 20: 18 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IDLDB=====IMS71Y=====22MAR2002==09: 20: 18====MVIS=====2
CMD DB Name      %I /O Dly      Mi n  Max  Vol Ser  Workl oad  Confi dence
---  -----      0. . . 15. . . 30 %Dly %Dly -----  Level
      CUSTHDAM    5  **              3    7 BAB326 ALL_IMS  None
      <Mi sc. . > 1              0    2 <Mi sc. ALL_IMS  None

```

Figure 33. IDLDB View

IDLDB view shows the databases causing I/O delays and their impact on elapsed time. If the I/O delay percentage is high for a database, you can hyperlink from it to a menu. This menu allows you to choose more detailed delay views to help you determine the cause and impact of database I/O delays.

For more information, you can position the cursor on any field in this view, and then press the help key.

# IDLDBD – Database I/O Delays by Data Set

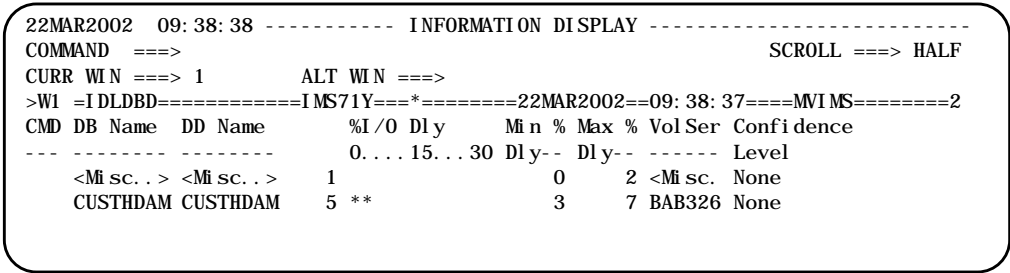


Figure 34. IDLDBD View

IDLDBD view breaks down the database I/O delays by the data sets used. Hyperlinking from a field in the first column of this view presents a menu. You can use this menu to obtain more detailed information about database I/O delays.

**Note:** For Fast Path, DD Name shows the Fast Path area.

For more information, you can position the cursor on any field in this view, and then press the help key.

# IDLDBI – Database I/O Delays by IMS

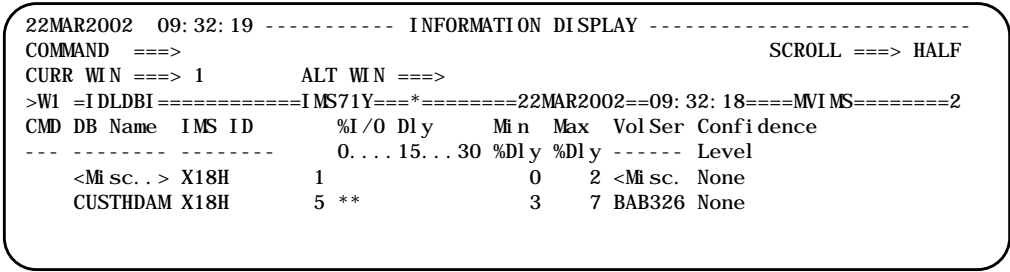


Figure 35. IDLDBI View

IDLDBI view shows the databases causing I/O delays and the impact on the IMS using that database. Hyperlinking from a field in the first column of this view presents a menu. You can use this menu to obtain more detailed information about database I/O delays.

For more information, you can position the cursor on any field in this view, and then press the help key.



## IDLDBP – Database I/O Delays by PSB

```

22MAR2002 09: 22: 04 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IDLDBP=====IMS71Y====*=====22MAR2002==09: 22: 04====MVIMS=====5
CMD DB Name  PSBName      %I/O Dly    Mi n  Max  Vol Ser  Confidence
-----
0. . . . 15. . . 30 %Dly %Dly ----- Level
<Mi sc. . > PHI DMUPD      1          1    1 <Mi sc. None
<Mi sc. . > PHI SMI NQ      2 *          2    2 <Mi sc. None
<Mi sc. . > PHI SMUPD      0          0    0 <Mi sc. None
CUSTHDAM PHDAMI NQ      7 ***          7    7 BAB326 None
CUSTHDAM PHDAMUPD      3 *          3    3 BAB326 None

```

Figure 36. IDLDBP View

IDLDBP view shows the databases causing I/O delays and the impact on the PSBs using them. Hyperlinking from a field in the first column of this view presents a menu. You can use this menu to obtain more detailed information about database I/O delays.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLDBTR – Database I/O Delays by Transaction

```

22MAR2002 09: 53: 03 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IDLDBTR=====IMS71Y====*=====22MAR2002==09: 53: 02====MVIMS=====5
CMD DB Name  Trancode     %I/O Dly    Mi n  Max  PSBName  Cls Vol Ser  Confidence
-----
0. . . . 15. . . 30 %Dly %Dly ----- Level
<Mi sc. . > THI DMUPD      1          1    1 PHI DMUPD  <Mi sc. None
<Mi sc. . > THI SMI NQ      2 *          2    2 PHI SMI NQ  <Mi sc. None
<Mi sc. . > THI SMUPD      0          0    0 PHI SMUPD  <Mi sc. None
CUSTHDAM THDAMI NQ      7 ***          7    7 PHDAMI NQ  BAB326 None
CUSTHDAM THDAMUPD      3 *          3    3 PHDAMUPD  BAB326 None

```

Figure 37. IDLDBTR View

IDLDBTR view shows the databases causing I/O delays and the impact on each transaction using them. Hyperlinking from a field in the first column of the IDLDBTR view presents a menu. You can use this menu to obtain more detailed information about database I/O delays.

For more information, you can position the cursor on any field in this view, and then press the help key.

# IDLDBV – Database I/O Delays by Volume

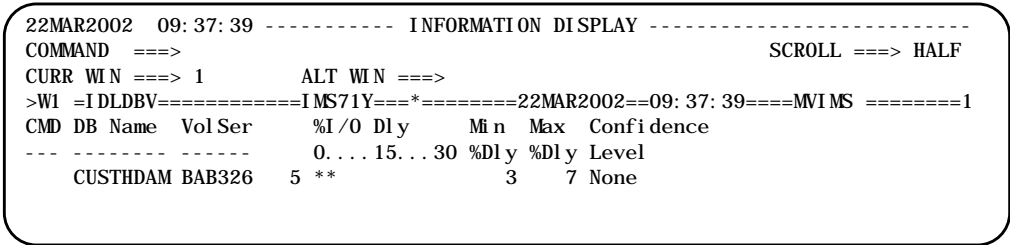


Figure 38. IDLDBV View

You can access IDLDBV view by hyperlinking from a VolSer field in the IDLDB view of I/O delays by database. This view breaks down the database I/O delays by the volumes used. You can use it to see if a volume is the cause of a database I/O delay. Hyperlinking from a field in the first column of this view presents a menu. You can use this menu to obtain more detailed information about database I/O delays.

For more information, you can position the cursor on any field in this view, and then press the help key.

## Data Set I/O Delays

Table 6 lists all the views available for data set I/O delays. Descriptions of each view follow on the referenced pages.

Table 6. Data Set I/O Delay Views

View	Name
I/O delays by data set	IDLDD
Data set I/O delays by IMS	IDLDDI (see page 64)
Data set I/O delays by PSB	IDLDDP (see page 64)
Data set I/O delays by transaction	IDLDDTR (see page 65)
Data set I/O delays by volume	IDLDDV (see page 65)

## IDLDD – I/O Delays by Data Set

```

22MAR2002 09:42:23 ----- INFORMATION DISPLAY -----
COMMAND ===>
CURR WIN ===> 1          ALT WIN ===>
>W1 =IDLDD=====IMS71Y====*=====22MAR2002==09:42:23====MVI MS =====2
CMD DD Name      %I/O Dly      Min  Max  Vol Ser Confidence
---
CUSTHDAM      5  **              3    7 BAB326 None
<Mi sc. . >    1              0    2 <Mi sc. None

```

Figure 39. IDLDD View

IDLDD view shows the data sets causing I/O delays and their impact on elapsed time. Hyperlinking from a field in the first column of this view presents a menu. This menu allows you to choose more detailed delay views to help you determine what is causing a long data set I/O delay.

**Note:** For Fast Path, DD Name shows the Fast Path area.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLDDI – Data Set I/O Delays by IMS

```
22MAR2002 09:57:24 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1 ALT WIN ==>
>W1 =IDLDDI=====IMS71Y====*=====22MAR2002==09:57:10====MVIMS =====2
CMD DD Name IMS ID %I/O Dly Min Max Vol Ser Confidence
-----
0...15...30 %Dly %Dly ----- Level
<Mi sc. .> X18H 1 0 2 <Mi sc. None
CUSTHDAM X18H 5 ** 3 7 BAB326 None
```

Figure 40. IDLDDI View

IDLDDI view shows the data sets causing I/O delays and the impact on the IMS using that data set. For Fast Path, DD Name shows the Fast Path area.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLDDP – Data Set I/O Delays by PSB

```
22MAR2002 09:56:08 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1 ALT WIN ==>
>W1 =IDLDDP=====IMS71Y====*=====22MAR2002==09:55:40====MVIMS =====5
CMD DD Name PSBName %I/O Dly Min Max Vol Ser Confidence
-----
0...15...30 %Dly %Dly ----- Level
<Mi sc. .> PHIDMUPD 1 1 1 <Mi sc. None
<Mi sc. .> PHISMINQ 2 ** 2 2 <Mi sc. None
<Mi sc. .> PHISMUPD 0 0 0 <Mi sc. None
CUSTHDAM PHDAMINQ 7 *** 7 7 BAB326 None
CUSTHDAM PHDAMUPD 3 ** 3 3 BAB326 None
```

Figure 41. IDLDDP View

IDLDDP view shows the data sets causing I/O delays and the impact on the PSBs using them. For Fast Path, DD Name shows the Fast Path area.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLDDTR – Data Set I/O Delays by Transaction

```
22MAR2002 09:54:01 ----- INFORMATION DISPLAY -----
COMMAND ==> SCROLL ==> HALF
CURR WIN ==> 1 ALT WIN ==>
>W1 =IDLDDTR=====IMS71Y====*=====22MAR2002==09:54:00====MVIMS =====5
CMD DD Name Trancode %I/O Dly Min Max VolSer Confidence
---
0...15...30 %Dly %Dly ----- Level
<Mi sc. . > THIDMUPD 1 1 1 <Mi sc. None
<Mi sc. . > THISMINQ 2 * 2 2 <Mi sc. None
<Mi sc. . > THISMUPD 0 0 0 <Mi sc. None
CUSTHDAM THDAMINQ 7 *** 7 7 BAB326 None
CUSTHDAM THDAMUPD 3 * 3 3 BAB326 None
```

Figure 42. IDLDDTR View

IDLDDTR view shows the data sets causing I/O delays and the impact on each transaction using them. For Fast Path, DD Name shows the Fast Path area.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLDDV – Data Set I/O Delays by Volume

```
22MAR2002 09:50:23 ----- INFORMATION DISPLAY -----
COMMAND ==> SCROLL ==> HALF
CURR WIN ==> 1 ALT WIN ==>
>W1 =IDLDDV=====IMS71Y====*=====22MAR2002==09:50:23====MVIMS =====1
CMD DD Name VolSer %I/O Dly Min Max Confidence
---
0...15...30 %Dly %Dly Level
CUSTHDAM BAB326 5 ** 3 7 None
```

Figure 43. IDLDDV View

You can access IDLDDV view by hyperlinking from the VolSer field in the

- IDLDD view of I/O delays by data set
- IDLDDI view of data set I/O delays by IMS
- IDLDDP view of data set I/O delays by PSB
- IDLDDTR view of data set I/O delays by transaction

This view breaks down the data sets causing I/O delays by the volumes used. You can use IDLDDV to see if a volume is the cause of a data set I/O delay. For Fast Path, DD Name shows the Fast Path area.

For more information, you can position the cursor on any field in this view, and then press the help key.

## Volume I/O Delays

Table 7 lists all the views available for volume I/O delays. Descriptions of each view follow on the referenced pages.

Table 7. Volume I/O Delay Views

View	Name
Major volume I/O delays	IDLVL (below)
Volume I/O delays by database	IDLVLDB (see page 67)
Volume I/O delays by data set	IDLVLDD (see page 67)
Volume I/O delays by IMS	IDLVLI (see page 68)
Volume I/O delays by PSB	IDLVLP (see page 68)
Volume I/O delays by transaction	IDLVLTR (see page 69)

### IDLVL – I/O Delays by Volume

```

22MAR2002 09:51:58 ----- INFORMATION DISPLAY -----
COMMAND ==> SCROLL ==> HALF
CURR WIN ==> 1 ALT WIN ==>
>W1 =IDLVL=====IMS71Y====*=====22MAR2002==09:51:58====MVIMS =====2
CMD Vol Ser      %I/O Dly      Mi n  Max  Confidence
---  -----  0...15...30 %Dly %Dly Level
      BAB326    5 **                3    7 None
      <Mi sc.    1                0    2 None

```

Figure 44. IDLVL View

IDLVL view shows the volumes causing I/O delays and their impact on elapsed time. Hyperlinking from a field in the first column of this view presents a menu. This menu allows you to choose more detailed delay views to help you determine what is causing a volume I/O delay.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLVLDB – Volume I/O Delays by Database

```
22MAR2002 13:35:38 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IDLVLDB=====IMS71Y==*=====22MAR2002==11:30:01====MVIMS =====1
CMD Vol Ser DB Name      %I/O Dly      Mi n  Max  Confidence
-----
      BAB326 CUSTHDAM    7 ***              7    7 Medi um
```

Figure 45. IDLVLDB View

IDLVLDB view shows the volumes causing I/O delays and the impact on the databases using them.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLVLDD – Volume I/O Delays by Data Set

```
22MAR2002 18:20:31 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
W1 =IDLVLDD=====SYSB=====*=====22MAR2002==18:20:31====MVIMS =====5
CMD Vol Ser DD Name      %I/O Dly      Mi n  Max  Confidence
-----
      BAB321 CUSTDD01    8 ***              3   10 Hi gh
      BAB321 CUSTDD03    7 ***              7    7 Medi um
      BAB322 CUSTDD02    5 **               2    8 Hi gh
      BAB322 CUSTDD11    8 ***              8    8 Medi um
      BAB323 CUSTDD01    0                   0    0 Hi gh
```

Figure 46. IDLVLDD View

IDLVLDD view shows the volumes causing I/O delays and the impact on the data sets they use. You can use it to see if a particular data set is causing the database delay. For Fast Path, DD Name shows the Fast Path area.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLVLI – Volume I/O Delays by IMS

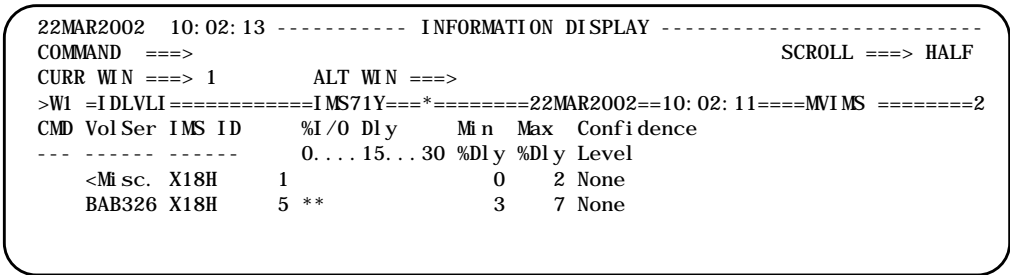


Figure 47. IDLVLI View

IDLVLI view shows the volumes causing I/O delays and the impact on the IMS using a volume.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLVLPS – Volume I/O Delays by PSB

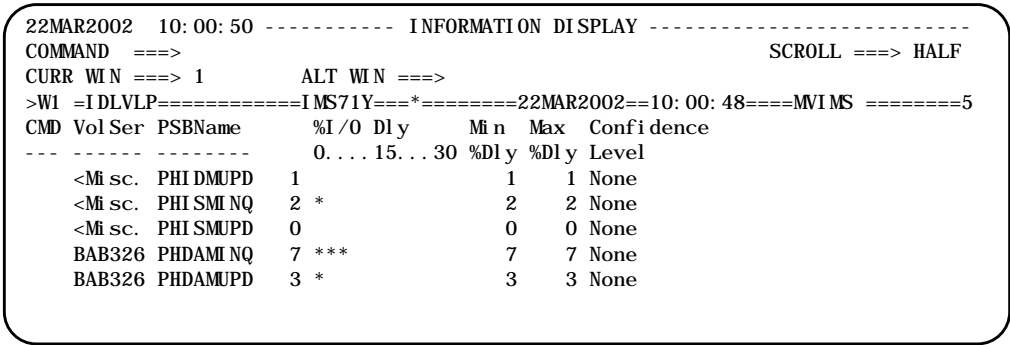


Figure 48. IDLVLP View

IDLVLPS view shows the volumes causing I/O delays and the impact on the PSBs using them.

For more information, you can position the cursor on any field in this view, and then press the help key.



## IDLVLTR – Volume I/O Delays by Transaction

```

22MAR2002 09: 53: 00 ----- INFORMATION DISPLAY -----
COMMAND ==> SCROLL ==> HALF
CURR WIN ==> 1 ALT WIN ==>
>W1 =IDLVLTR=====IMS71Y==*=====22MAR2002==09: 53: 00====MVI MS =====5
CMD Vol Ser Trancode %I/O Dly Min Max PSBName Cls Confidence
--- 0. . . . 15. . . 30 %Dly %Dly ----- --- Level
<Mi sc. THI DMUPD 1 1 1 PHI DMUPD None
<Mi sc. THI SMI NQ 2 * 2 2 PHI SMI NQ None
<Mi sc. THI SMUPD 0 0 0 PHI SMUPD None
BAB326 THDAMI NQ 7 *** 7 7 PHDAMI NQ None
BAB326 THDAMUPD 3 * 3 3 PHDAMUPD None

```

Figure 49. IDLVLTR View

IDLVLTR view shows the volumes causing I/O delays and the impact on each transaction using them.

For more information, you can position the cursor on any field in this view, and then press the help key.

# Lock Delays

Table 8 lists all the views available for lock delays. Descriptions of each view follow on the referenced pages.

Table 8. Lock Delay Views

View	Name
Lock delays	IDLLK (below)
Lock delays by IMS	IDLLKI (see page 71)
Lock delays by PSB	IDLLKP (see page 71)
Lock delays by transaction	IDLLKTR (see page 72)

## IDLLK – Lock Delays

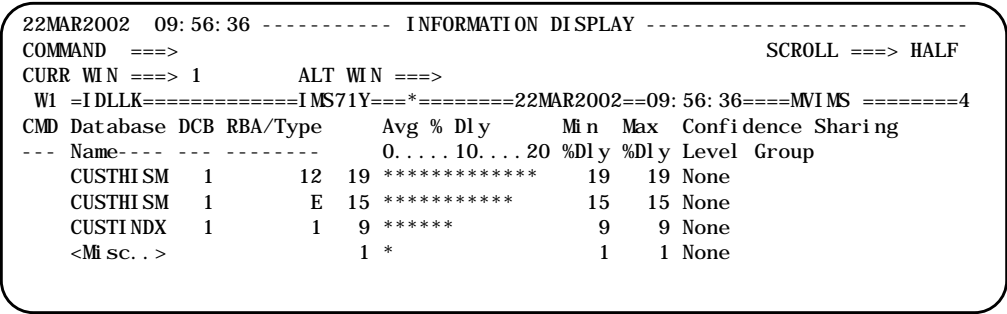


Figure 50. IDLLK View

IDLLK view shows the locks causing transaction delays and their impact on elapsed time. You can hyperlink from a field in the first column to a menu. This menu allows you to choose more detailed delay views to help you determine what is causing a lock delay.

**Note:** For Fast Path, Database Name shows the Fast Path area.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLLKI – Lock Delays by IMS

```
22MAR2002 10:00:29 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IDLLKI=====IMS71Y==*=====22MAR2002==10:00:29====MVIMS =====4
CMD Database DCB RBA/Type IMSID      Avg % Dly      Mi n  Max  Confidence
--- Name-----
<Mi sc. . >          X18H      1 *
CUSTHISM      1          E X18H      15 *****      15  15 None
CUSTHISM      1          12 X18H      19 *****      19  19 None
CUSTINDX      1          1 X18H      9 *****      9   9 None
```

Figure 51. IDLLKI View

IDLLKI view shows the locks causing delays and the impact on an IMS. For Fast Path, Database Name shows the Fast Path area.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLLKP – Lock Delays by PSB

```
22MAR2002 09:58:46 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IDLLKP=====IMS71Y==*=====22MAR2002==09:58:45====MVIMS =====4
CMD Database DCB RBA/Type PSBName     Avg % Dly      Mi n  Max  Confidence
--- Name-----
CUSTHISM      1          E PHISMINQ    15 *****      15  15 None
CUSTHISM      1          19 PHISMINQ    19 *****      19  19 None
```

Figure 52. IDLLKP View

You can access IDLLKP view by hyperlinking from a PSBName field in the IDLLKTR view of lock delays by transaction. IDLLKP view shows the locks causing delays and the impact on a PSB. For Fast Path, Database Name shows the Fast Path area.

For more information, you can position the cursor on any field in this view, and then press the help key.

# IDLLKTR – Lock Delays by Transaction

22MAR2002 09: 57: 44 ----- INFORMATION DISPLAY -----

COMMAND ==>SCROLL ==> HALF

CURR WIN ==> 1ALT WIN ==>

>W1 =IDLLKTR=====IMS71Y=====22MAR2002==09: 57: 44====MVIMS =====4

CMD	Database	DCB	RBA/Type	Trancode	Avg % Dly	Min	Max	PSBName	Cls
---	Name	----	-----	-----	0. . . . . 10. . . . 20 %Dly	%Dly	%Dly	-----	---
<Mi sc. . >				THI SMI NQ	1 *	1	1	PHI SMI NQ	
CUSTHI SM	1		E	THI SMI NQ	15 *****	15	15	PHI SMI NQ	
CUSTHI SM	1		12	THI SMI NQ	19 *****	19	19	PHI SMI NQ	
CUSTINDX	1		1	THI DMI NQ	9 *****	9	9	PHI DMI NQ	

Figure 53. IDLLKTR View

IDLLKTR view shows the lock causing delays and the impact on each transaction. For Fast Path, Database Name shows the Fast Path area.

For more information, you can position the cursor on any field in this view, and then press the help key.

## Latch Delays

Table 9 lists all the views available for latch delays. Descriptions of each view follow on the referenced pages.

Table 9. Latch Delay Views

View	Name
Latch delays	IDLLH (below)
Latch delays by IMS	IDLLHI (see page 74)
Latch delays by PSB	IDLLHP (see page 74)
Latch delays by transaction	IDLLHTR (see page 75)

## IDLLH – Latch Delays

22MAR2002 10: 01: 15 ----- INFORMATION DISPLAY -----									
COMMAND ==>					SCROLL ==> HALF				
CURR WIN ==> 1					ALT WIN ==>				
W1 =IDLLH=====IMS71Y==*=====22MAR2002==10: 01: 15====MVIMS =====1									
CMD Latch		Avg % Dly		Min	Max	Confidence			
--- ID-----		0. .... 5. .... 10		%Dly	%Dly	Level			
<Mi sc. . >		1	*	0	2	None			

Figure 54. IDLLH View

IDLLH view shows the latches causing transaction delays and their impact on elapsed time. You can hyperlink from a field in the first column to a menu. This menu allows you to choose more detailed delay views to help you determine what is causing a latch delay.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLLHI – Latch Delays by IMS

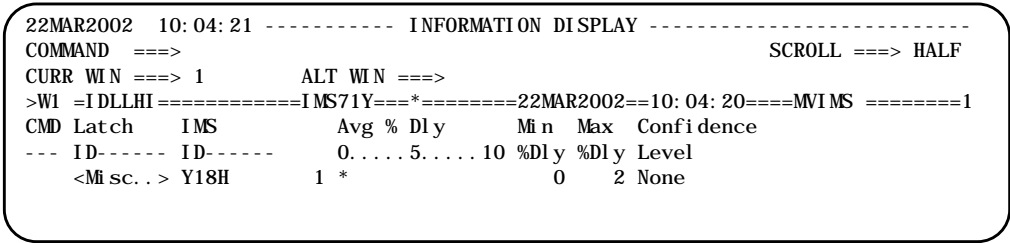


Figure 55. IDLLHI View

You can access IDLLHI view by hyperlinking from an IMS ID field in the IDLLHTR view of latch delays by transaction. This view shows the latches causing delays and the impact on an IMS.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLLHP – Latch Delays by PSB

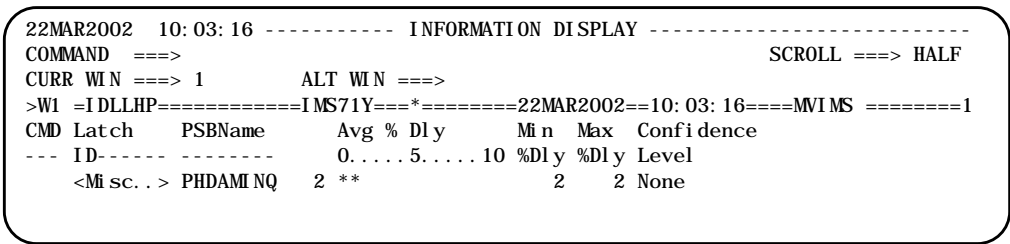


Figure 56. IDLLHP View

You can access IDLLHP view by hyperlinking from a PSBName field in the

- IDLLHTR view of latch delays by transaction
- IDLTRLH view of latch delays by latch

This view shows the latches causing delays and the impact on a PSB.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IDLLHTR – Latch Delays by Transaction

```

22MAR2002 11:32:25 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IDLLHTR=====IMS71Y==*=====22MAR2002==11:30:54====MVIMS =====4
CMD Latch   Trancode   Avg % Dly   Mi n   Max   IMS   PSBName   Cl s   Confidence
--- ID-----          0. . . . . 5. . . . . 10 %Dly %Dly ID   ----- --- Level
<Mi sc. . > THDAMI NQ   2   **                2     2   Y18H   PHDAMI NQ   None
<Mi sc. . > THDAMUPD   1   *                  1     1   Y18H   PHDAMUPD   None
<Mi sc. . > THIDMI NQ   1   *                  1     1   Y18H   PHIDMI NQ   None
<Mi sc. . > THISMUPD   0                   0     0   Y18H   PHISMUPD   None

```

Figure 57. IDLLHTR View

IDLLHTR view shows the latches causing delays and the impact on each transaction.

For more information, you can position the cursor on any field in this view, and then press the help key.

---

## Views for UOW Elapsed Time Analysis

This section lists all the views available to help you identify the unit of work processing events that are contributing to unit of work elapsed time. The views are classified into the components of transaction flow through IMS.

Measured data is presented by these views in textual form, graphical form, or both. Scrolling right presents more data for that view. You can restrict view presentation by context, scope, or filters. (To see which restriction categories apply to a view, position the cursor on the view name on the window information line within the view, and then press the help key.)

To analyze transaction response, start with IFCTR view. This view allows you to

- View processing events for all transactions
- See the IMS processing events that contributed to each transaction's elapsed time
- Determine where transactions spend their time during IMS processing

Within IFCTR view, select a trancode and then hyperlink from it to an Object Easy Menu. The Object Easy Menu provides you with the following view options:

- Transaction processing events relative to DBCTL
- Workload processing events
- Application
- DL/I
- DL/I calls
- Sync point
- ROLS
- Scheduling

As described in the *Using MAINVIEW* manual, you can customize views and create screens that include several views to meet your site's needs.



## IMS Processing Events

Table 10 lists all the views available for IMS processing events. Descriptions of each view follow on the referenced pages.

Table 10. IMS Processing Event Views

View	Name
Major IMS processing events	IFCTR (see page 78)
Application	IFCTRA (see page 79)
DL/I	IFCTRD (see page 80)
DL/I calls	IFCTRI (see page 81)
Sync point	IFCTRP (see page 82)
ROLS	IFCTRR (see page 83)
Scheduling	IFCTRS (see page 84)

# IFCTR – Processing Events by Transaction

22MAR2002 10: 44: 43 ----- INFORMATION DISPLAY -----

COMMAND ==>> 

SCROLL ==>> CSR

CURR WIN ==>> 1 ALT WIN ==>>

>W1 =IFCTR=====IMS71D==\*=====22MAR2002==10: 16: 56====MVI MS=====1

CMD	Trancode	Intvl	IMS	Avg	Avg %InputQ	Avg %Elapse	Avg %	Avg %
---	-----	Time-	ID	Resp	0. . . . . 50. . . 100	0. . . . . 50. . . 100	Appl	DLI
	DLZZ	10: 16	D19H	3. 91	n/a	100	*****	24 17
	DLZZ2	10: 16	D19H	3. 43	n/a	100	*****	47 13
	DLZZ3	10: 16	D19H	3. 24	n/a	100	*****	32 11
	DLZZ	10: 16	D19H	3. 91	n/a	100	*****	24 17

Figure 58. IFCTR View

You can access IFCTR view by

- Hyperlinking from the Tran Processing option of the EZIMS or EZIFAST menu
- Typing the view name on the command line
- Typing VIEWS, and then selecting IFCTR from the list of views presented

A highlighted field column header indicates you can select the field to hyperlink to a more detailed view.

The Avg Resp field shows the average amount of time that units of work associated with each tranocode spent in execution, which allows you to quickly determine whether there is a problem occurring in a processing event (%Elap). The other columns break down the events that occurred as IMS processed the transaction. A high percentage shown by any of these events indicates where a potential problem could be. For example, if Avg Appl is high, you can hyperlink to a view of application processing for that transaction to see what process may be contributing to this event.

Hyperlinking from a field in the first column of the IFCTR view presents a menu. This menu serves as a platform to obtain more detailed information about the IMS processing events contributing to elapsed time.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IFCTRA – Application by Transaction

```
22MAR2002 10:32:01 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IFCTRA=====IMS71Y==*=====22MAR2002==10:32:01====MVIMS =====1
CMD Trancode IMS Avg      Avg % Appl      %CPU %CPU %I/O %F/L %SVC %Oth
--- --- ID Resp 0. .... 25. .... 50 Act Dly Dly Dly Dly Dly
      TDRI VER Y18H 1053. 27 ***** 6 2 16 2
```

Figure 59. IFCTRA View

You can access IFCTRA view by

- Hyperlinking from the Avg % Appl field in the IFCTR view of IMS processing events
- Selecting it as a menu option
- Typing its name on the command line

This view shows the average amount of time a transaction spent in application processing. It shows where time was spent, such as waiting for CPU to be available (%CPU Dly) or program fetch and load delay (%F/L Dly), and its impact on transaction elapsed time. Hyperlinking from a field in the first column of this view presents a menu. You can use this menu to see other detailed information about transaction processing events and delays.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IFCTRD – DL/I by Transaction

```
22MAR2002 05:34:07 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1=IFCTRD=====IMS71Y==*=====22MAR2002==05:34:07====MVIMS =====1
CMD Trancode IMS Avg % Avg DLI Avg% Avg% Avg% Confidence
----- ID Resp 0.....25.....50 Cal1 ROLS Sync Level
      TDRIVER Y18H 1053. 73 *****+ 20 53 High
```

Figure 60. IFCTRD View

You can access IFCTRD view by

- Hyperlinking from the Avg % DLI field in the IFCTR view of IMS processing events
- Selecting it as a menu option
- Typing its name on the command line

This view shows the average amount of time a transaction spent in DL/I execution. It shows where time was spent and its impact on transaction elapsed time. Hyperlinking from a field in the first column of this view presents a menu. You can use this menu to see other detailed information about transaction processing events and delays.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IFCTRI – DL/I Calls by Transaction

```

22MAR2002  10: 46: 05  -----  INFORMATION DISPLAY  -----
COMMAND  ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IFCTRI=====IMS71Y==*=====22MAR2002==10: 46: 05====MVIMS =====1
CMD Trancode  IMS   Avg          Avg % DLI          %CPU %CPU %I/O %Lck %Lch %Oth
---  -----  ID   Resp      0. .... 25. .... 50  Act  Dly  Dly  Dly  Dly  Dly
      TDRIVER  Y18H 1053.   20  *****              6    9              0    5

```

Figure 61. IFCTRI View

You can access IFCTRI view by

- Hyperlinking from the Avg % Call field in the IFCTRD view of DL/I execution events
- Selecting it as a menu option
- Typing its name on the command line

This view shows the average amount of time a transaction spent in DL/I call processing. It shows where time was spent and its impact on transaction elapsed time. Hyperlinking from a field in the first column of this view presents a menu. You can use this menu to see other detailed information about transaction processing events and delays.

For more information, you can position the cursor on any field in this view, and then press the help key.

# IFCTRP – Sync Point by Transaction

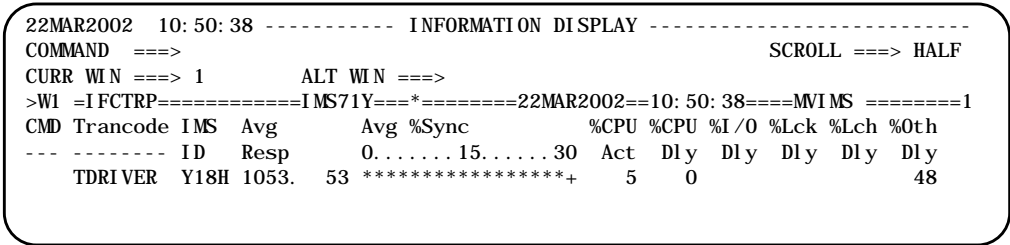


Figure 62. IFCTRP View

You can access IFCTRP view by

- Hyperlinking from the Avg% Sync field in the IFCTRD view of DL/I processing events
- Selecting it as a menu option
- Typing its name on the command line

This view shows the average amount of time a transaction spent in sync point processing. It shows where time was spent by the IMS sync point manager in acquiring resources and the impact on transaction elapsed time by that event. Hyperlinking from a field in the first column of this view presents a menu. You can use this menu to see other detailed information about transaction processing events and delays.

For more information, you can position the cursor on any field in this view, and then press the help key.

## IFCTRR – ROLS by Transaction

```

22MAR2002 10: 52: 34 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IFCTRR=====IMS71Y==*=====22MAR2002==10: 52: 34====MVIMS =====1
CMD Trancode IMS Avg      Avg % ROLS      %CPU %CPU %I/O %Lck %Lch %Oth
--- ----- ID  Resp    0. .... 25. .... 50 Act Dly  Dly  Dly  Dly  Dly
      THISMINQ Y18H 0.87 19 *****              14    1      4

```

Figure 63. IFCTRR View

You can access IFCTRR view by

- Hyperlinking from the Avg% ROLS field in the IFCTRD view of DL/I processing events
- Selecting it as a menu option
- Typing its name on the command line

This view shows the average amount of time a transaction spent in ROLS processing. It shows where time was spent and its impact on transaction elapsed time. Hyperlinking from a field in the first column of this view presents a menu. You can use this menu to see other detailed information about transaction processing events and delays.

For more information, you can position the cursor on any field in this view, and then press the help key.

# IFCTRS – Scheduling by Transaction

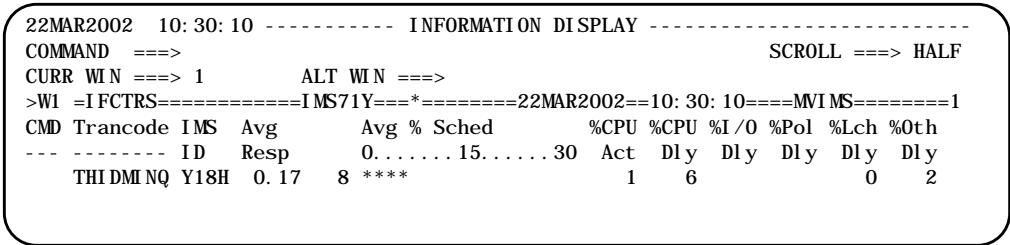


Figure 64. IFCTRS View

You can access IFCTRS view by

- Hyperlinking from the Trancode field in the IFCTR view of IMS processing events and selecting it as a menu option
- Hyperlinking to it from the IFCTRQ view
- Typing its name on the command line

This view shows the average amount of time a transaction spent in scheduling. It shows where time was spent by the IMS scheduler in acquiring resources and its impact on transaction elapsed time. Hyperlinking from a field in the first column of this view presents a menu. You can use this menu to see other detailed information about transaction processing events and delays.

For more information, you can position the cursor on any field in this view, and then press the help key.



---

## Chapter 6. Examining a User Application

This chapter explains how to use the MAINVIEW for DBCTL IPSM Transaction Trace views to examine problem trends with a user application, transaction, or program. These views help you identify the cause of problem trends. You can use these views to solve performance problems detected by

- MAINVIEW VistaPoint
- IPSM UOW Elapsed Time and Delay Analysis views
- Your user
- Other performance monitoring tools

As shown in Figure 65, to investigate poor application performance, start by viewing a list of completed transaction traces.

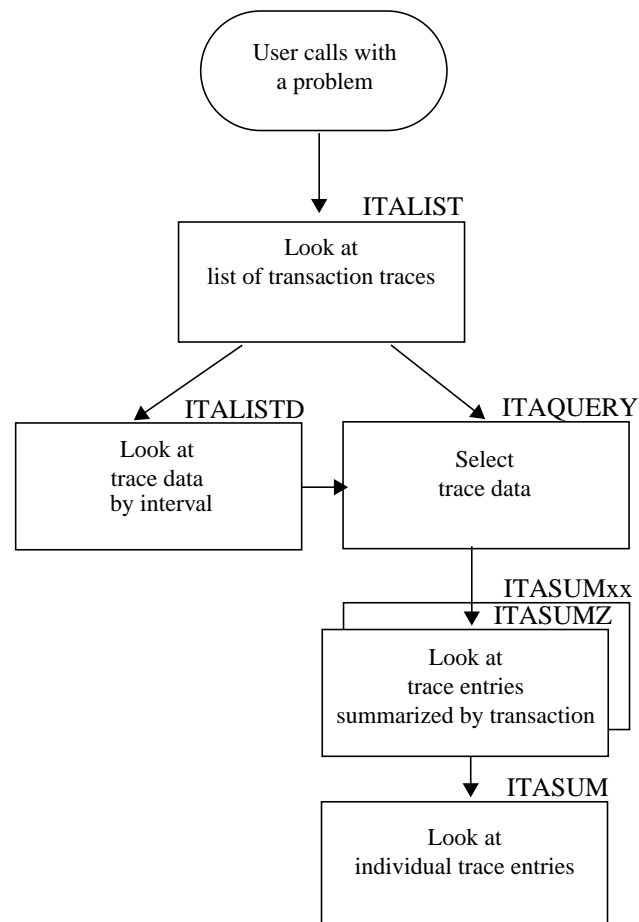


Figure 65. Tracing an Application

From the ITALIST view, you can access all currently active traces, as well as historical traces collected from the trace log data sets.

ITALIST hyperlinks allow you to select

- A trace query request where you can change and/or run the request against collected data  
This allows you to select trace data you wish to view.

- Details about the contents of trace data

Using the detailed view, you can see average highs, lows, and trends. You can also hyperlink to a summary trace view qualified by a trace query request per time interval. Trace summary views group trace data by attributes, such as transaction code, PSB, IMS, or user.

For more information about ITALIST, see “ITALIST – List of Transaction Trace Data Sets” on page 89.

---

## Interpreting Data in Transaction Trace Views

The following points should be kept in mind when interpreting values reported in MAINVIEW for DBCTL (MVDBC) transaction trace views:

- MVDBC reports on the IMS activity incurred during the processing of CICS transactions requiring DL/I resources. It does not report on CICS activity overall. Therefore, for DBCTL threads, fields whose headers refer to response time are actually reporting elapsed time of the DL/I thread activity for a unit of work—not response time for the CICS transaction.

The CICS transaction may contain multiple DL/I units of work. In most cases, a CICS transaction is made up of one unit of work. It is possible for a CICS transaction to commit resources (completing the current UOW and beginning the next logical UOW) as part of the processing of a single CICS transaction. This is analogous to a BMP issuing checkpoint calls.

- MVDBC reports only activity that is a part of the IMS DBCTL. An application may have performed DB2 work, but not as part of its DBCTL thread activity. Therefore, this activity is not reported by MVDBC.

For information related to the total transaction execution, refer to data collected in views in the MAINVIEW for CICS product.

---

## Views for Application Performance Analysis

This section describes the views you can use to isolate application performance problems.

### Transaction Trace Views

Table 11 lists all of the views available in for transaction traces.

All views are described in the online help. From a view:

- Select the name of the view and press your help key.
- Enter HELP and the name of the view on the command line.

Table 11. Transaction Trace Views

View	Name	Description
Trace list	ITALIST	List of transaction traces
	ITALISTD	Trace detail by time intervals
Trace query	ITAQUERY	Trace data selection
Summarized trace	ITASUM	Trace entries
	ITASUMI	Trace entries summarized by IMS
	ITASUMIP	Trace entries summarized by IMS by PSB
	ITASUMIT	Trace entries summarized by IMS by transaction
	ITASUMP	Trace entries summarized by PSB
	ITASUMPI	Trace entries summarized by PSB by IMS
	ITASUMTI	Trace entries summarized by transaction by IMS
	ITASUMU	Trace entries summarized by user
	ITASUMUT	Trace entries summarized by user by transaction
	ITASUMZ	Trace entries summarized by transaction

## ITALIST – List of Transaction Trace Data Sets

COMMAND ==>						SCROLL ==> CSR			
22MAR2002 10: 24: 15 ----- INFORMATION DISPLAY -----									
CURR WIN ==> 1			ALT WIN ==>						
>W1 =ITALIST===== (ALL=====IMS71X==) 22MAR2002==10: 24: 14====MVIMS=====346									
End		Number		Service		Target			
End Date	Time	Trace Id	Trace Title	Type	State	Trans	Status	Jobname	
N/A	N/A	IPSMSUM	SUMMARY TRACE - TE	Sum	Curr		Qui esce	IMS71X	
16APR2002	11: 10	IPSMSUM	IPSM SUM TRACE	Sum	Hi st	326		IMS71X	
16APR2002	08: 32	IPSMSUM	IPSM SUM TRACE	Sum	Hi st	112		IMS71X	
16APR2002	08: 18	IPSMDET	IPSM DET TRACE	Det	Hi st	24		IMS71X	
16APR2002	06: 18	IPSMSUM	IPSM SUM TRACE	Sum	Hi st	242		IMS71X	
14APR2002	07: 43	IPSMABR	IPSM ABR TRACE	Abr	Hi st	4322		IMS71X	

Figure 66. ITALIST View

You can access ITALIST view by performing one of the following:

- Hyperlinking to it from any Transaction Traces menu option in the EZMenu
- Typing its name on the command line

ITALIST is a view of trace entries. Each line reports on an individual trace. It shows the last recorded date and time, trace ID and description, total number of trace records for each entry, trace type (detail, summary, or abbreviated) target jobname, and the data set token ID. Scrolling right provides more information, such as first and last recorded start date and time and the number of data sets. Selecting

- End Time hyperlinks to the ITAQUERY view for the trace you select and sets TIME for the query to the last interval recorded in the trace
- Trace ID hyperlinks to the ITAQUERY view for the trace you select
- Nbr of Trans hyperlinks to the ITALISTD view for the trace you select

For more information, you can position the cursor on any field in this view, and then press the help key.

# ITALISTD – Trace Detail

22MAR2002 16: 53: 41 ----- INFORMATION DISPLAY -----

COMMAND ==>

SCROLL ==> HALF

CURR WIN ==> 1

ALT WIN ==>

>W1 =ITALI STD=====IMS71Y==\*=====22MAR2002==16: 51: 45====MVIMS=====4

- Date	Start Time	End Time	Nbr of Trans	Avg Resp	Avg InpQ	Avg El ap	Avg DL/I	Avg I/O	Avg DB2	Abend Cnt
21MAY2002	11: 15	11: 30	12852	0. 094	0. 000	0. 094	7	0		0
21MAY2002	11: 30	11: 45	921	0. 086	0. 000	0. 086	37	0		0
21MAY2002	11: 45	12: 00	5709	0. 093	0. 000	0. 093	7	0		0
21MAY2002	12: 00	12: 15	5550	0. 096	0. 000	0. 096	7	0		0

Figure 67. ITALISTD View

You can access ITALISTD view by hyperlinking to it from the Nbr of Trans field in the ITALIST view

ITALISTD shows the data collected in the active trace buffer if trace is active and, as well as in a historical trace log data set if the LOG option for the trace is selected. It provides statistics showing

- How many trace records were written in a period of time
- Averages for UOW elapsed time, database calls, and I/O
- Maximums and minimums for elapsed time

Selecting an element from Nbr of Trans hyperlinks to ITAQUERY view, where you can restrict trace data display by running a query request against the collected data. The query request is primed with the average values calculated by ITALISTD. You can run the request with these values or you can replace them. This allows you to look for worse than average cases.

For more information, you can position the cursor on any field in this view, and then press the help key.

## ITAQUERY – Select Trace Data

```
22MAR2002 16:46:33 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
W1 =ITAQUERY=====IMS71Y====*=====22MAR2002==16:46:31====MVIMS =====1
                                Trace Query Parameters

Command. .... (required)                                R- Run, Q- Edit QWHERE
Traceid,DsnId (required) ABR3,32

Time Period. .... 21MAY2002 12:09 11                    Update with TIME command
Workload Name. .... *
Transaction Code. .... *
PSB Name. .... *
Response Time      >= 0.5
Elapsed Time       >= 0.5
```

Figure 68. ITAQUERY View

You can access this view by

- Hyperlinking to it from an End Time or Trace ID field in the ITALIST view
- Entering the view name on the command line

You can use this view to create and execute a query against the trace data in a trace data set. Trace data is selected by the trace ID and the data set name ID (or token) in the Traceid and DsnId fields. The data retrieved is presented in the ITASUMZ view.

You must enter either R to RUN your query request or Q to modify the QWHERE clause used by the query. QWHERE allows you to create complex expressions and use other trace filter parameters.

You can specify other trace query parameters for trace ID, data set ID, transaction code, PSB name, and thresholds for response and elapsed time

**Note:** Trace may record a large number of UOWs (units of work) in an interval. To reduce the number of UOWs returned, specify filtering criteria.

# ITASUM – Trace Entries

22MAR2002 09:33:19 ----- INFORMATION DISPLAY -----

COMMAND ==>

SCROLL ==> HALF

CURR WIN ==> 1

ALT WIN ==>

>W1 =ITASUM=====IMS71Y====\*=====22MAR2002==09:29:36====MVIMS=====5

	Trn	Resps	El apsd	DLI	DLI	DB2	Total	DLI	DB2	End	
--	Trancode	Type	Time	Time	Call s	I/O	Call s	CPU	CPU	CPU	Time
	THIDMINQ	DBT	1.960	1.960	7			0.0064	0.0031	0.000	10:07:02.84
	THIDMINQ	DBT	1.230	1.230	7			0.0064	0.0033	0.000	10:07:05.74
	THIDMINQ	DBT	1.250	1.250	6			0.0063	0.0053	0.000	10:07:15.47
	THIDMINQ	DBT	1.200	1.200	9			0.0166	0.0041	0.000	10:07:23.27
	THIDMINQ	DBT	1.370	1.370	9			0.0116	0.0069	0.000	10:07:55.78

Figure 69. ITASUM View

You can access ITASUM view by

- Hyperlinking from the Cnt field in the ITASUMZ view
- Entering the view name on the command line

This view shows transaction occurrences for a given time period:

- Elapsed time for each unit of work
- Total CPU time and DL/I CPU time for the unit of work
- Number of DL/I database calls

Scrolling right provides more trace data. You can hyperlink from a field in the first column of this view to a trace menu.

For more information, you can position the cursor on any field in this view, and then press the help key.



## ITASUMZ – Trace Entries Summarized by Transaction

22MAR2002 14:01:46 ----- INFORMATION DISPLAY -----												
COMMAND ==>							SCROLL ==> CSR					
CURR WIN ==> 1				ALT WIN ==>								
>H1 =ITASUMZ=====IMS71Y==*=====22MAR2002==10:45:01====MVIMS=====3												
--	Trancode	Cnt	Trn Type	Time	Input Queue	El apsd Time	DLI Calls	DLI I/O	DB2 Calls	Total CPU	DLI CPU	DB2 CPU
	THIDMI NQ	100	DBT	0.056	0.000	0.056	6	0		0.0101	0.0054	0.000
	THIDMUPD	100	DBT	0.035	0.000	0.035	2			0.0056	0.0004	0.000
	THISMI NQ	100	DBT	0.144	0.000	0.144	10	0		0.0133	0.0077	0.000

Figure 70. ITASUMZ View

You can access ITASUMZ view by

- Requesting a trace query with the ITAQUERY view
- Entering the view name on the command line

This view shows transactions summarized by transaction code. It provides transaction execution details. You can hyperlink from a field in the first column of this view to a trace object menu. From the trace object menu, you can select other trace summary grouping options for further analysis, to refine a query request, or to select trace data from a different time period.

For more information, you can position the cursor on any field in this view, and then press the help key.



---

## Chapter 7. Monitoring IMS Workloads and Resources

From the IMSplex System Manager (IPSM) view environment, you can request the Workload Monitor and Resource Monitor services described in the *MAINVIEW for DBCTL Analyzers, Monitors, and Traces Reference Manual*. These services are timer-driven monitors that measure IMS workload and resources over time as requested by a user. Once a monitor is active, you can use the following set of IPSM views.

IMON	Shows how many monitors are active for each target and the number that are in a warning condition
ISERV	Lists all active monitors
IMAREAZ	Shows how many monitors are active by IMS area and the number that are in a warning condition for each target
IMWARN	Lists all monitors in a warning condition

To access these views, you can enter the view name on the command line.

Starting with IMON shows you how many monitors are running. From there, you can hyperlink to

- ISERV to see the monitor values  
You can select a monitor displayed by ISERV and hyperlink to a view of a plot produced by that monitor.
- IMAREAZ to see the monitors summarized by target area  
You can hyperlink from here to ISERV, select a monitor, and view a plot from that monitor.
- IMWARN to see only those monitors in warning  
You can select a monitor displayed by IMWARN and hyperlink to a view of a plot produced by that monitor. Easy Menus also provide hyperlinks to these monitor views.

# IMON – Target Monitor Summary

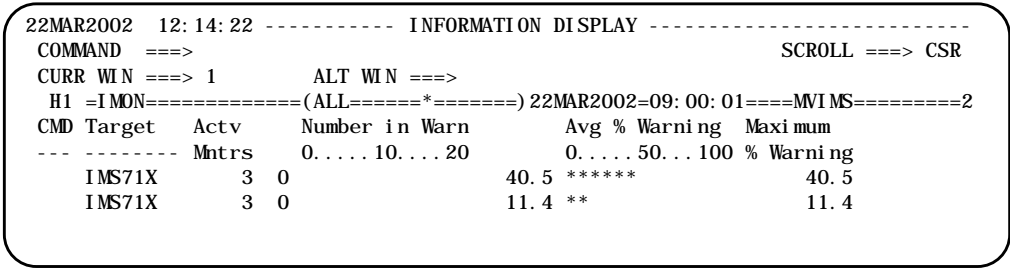


Figure 71. IMON View

IMON view summarizes the number of monitors started for each target, shows how many of those monitors are in a warning condition, and shows the warning value. Hyperlinking from an element in the

- Target column or Actv Mntrs column displays the ISERV view
- Number in Warn column displays the IMWARN view

You can access this view by typing its name on the command line, or by selecting the Monitors in Exception option from the EZIMS menu or the Monitors in Warning option from the EZIFAST menu.

For more information, you can position the cursor on any field in this view, and then press the help key.

# ISERV – Active Monitors

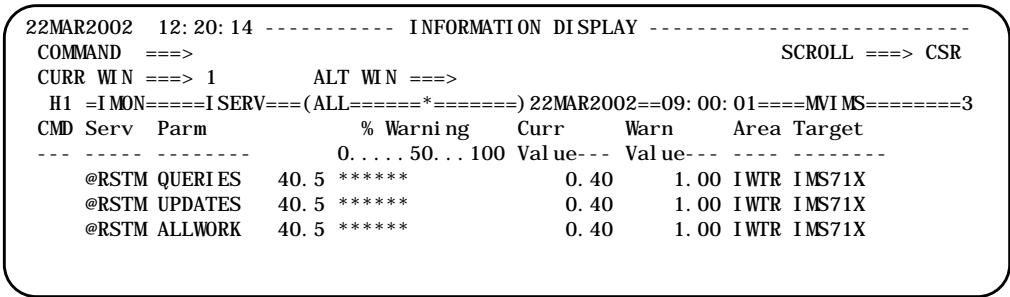


Figure 72. ISERV View

ISERV view lists the individual monitors by name for each target. Selecting a monitor lets you view a plot of data collected by that monitor.

You can access this view by hyperlinking from Target or Actv Mntrs in the IMON view.

For more information, you can position the cursor on any field in this view, and then press the help key.

---

## IMAREAZ – Target by Area Monitor Summary

```
22MAR2002 12:36:27 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 2          ALT WIN ==>
W2 =IMAREAZ===== (ALL=====*)===== 22MAR2002==12:36:27====MVIMS=====3
CMD
--- Target   Area      Number  Number      Average Maximum Number
--- Target   Area      Monitors in Warn 0.....10 Warning Warning Active
IMS71X   IWTRN           3      0
IMS71X   IWKLD           5      1 *
IMS71X   QUEUE           4      0
```

Figure 73. IMAREAZ View

IMAREAZ view summarizes the number of monitors by target area and shows their status. You can hyperlink to the ISERV view from an element in the Area or Number Monitors column to see what the monitors are for the selected target and area. Number in Warn hyperlinks to the IMWARN view for the selected target and area.

You can access this view by typing its name on the command line.

For more information, you can position the cursor on any field in this view, and then press the help key.

---

## IMWARN – Monitors in Warning

```
22MAR2002 12:27:45 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
H1 =IMWARN=====IMS71X====*=====22MAR2002==09:00:01====MVIMS=====3
CMD Serv Parm          % Warning  Curr      Warn      Area Target
--- --- --- ---
@RSTM QUERIES 111.4 ***** 1.11      1.00 IWTR IMS71X
@RSTM UPDATES 131.4 ***** 1.31      1.00 IWTR IMS71X
@RSTM ALLWORK 108.4 ***** 1.08      1.00 IWTR IMS71X
```

Figure 74. IMWARN View

IMWARN view displays only those monitors in a warning condition. It shows how many monitors are in warning and the defined threshold for each target. Selecting a monitor lets you view a plot of data collected by that monitor.

You can access this view by hyperlinking from a Number in Warn element in the IMON view.

For more information, you can position the cursor on any field in this view, and then press the help key.

# MAINVIEW for DBCTL Monitors

When you select a monitor from ISERV or IMWARN, a view showing a plot of the data collected by that monitor is displayed, as shown in Figure 75.

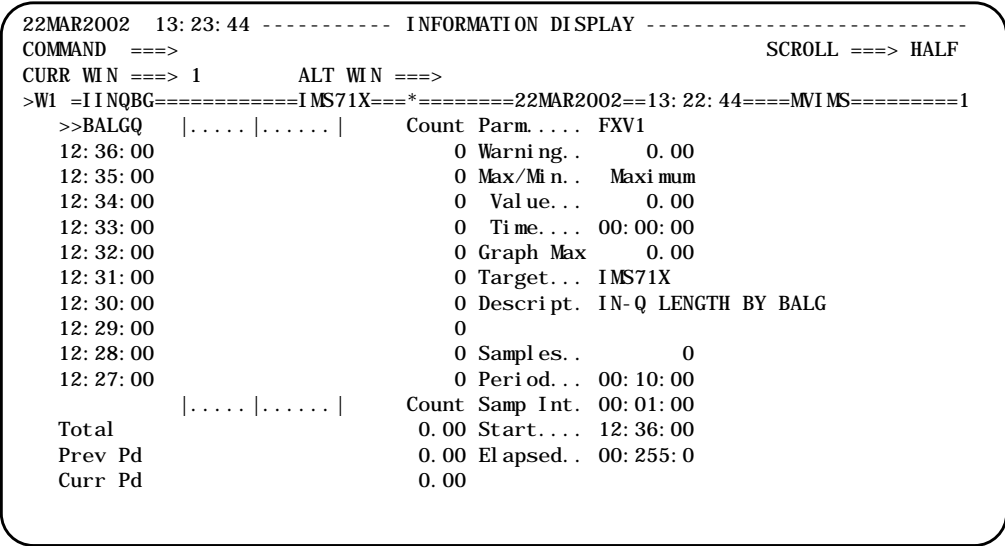


Figure 75. IINQBG View

Each plot provided by a monitor has a hyperlink to a corresponding MVIMS service that you can use for detail analysis of your target’s performance. The hyperlink is indicated by >> in the upper left portion of the view. In the preceding example, it is >>BALGQ. This is a hyperlink to the IMS analyzer BALGQ online service. When you make this hyperlink, you have access to all the online services provided by the IMS analyzer and monitor components of MVDBC.

The following sections list the monitor plot views for the IMS workload and resource monitor services described in the *MAINVIEW for DBCTL Analyzers, Monitors, and Traces Reference Manual*. The descriptions are in tabular form and categorized by IMS area. Each table shows the plot view and its corresponding monitor and describes the performance data provided.

---

## IMS Workload Monitors

This section describes the views and monitors that provide performance plot displays about IMS:

- Fast Path activity
- Global region calls
- Elapsed timing

### Fast Path Activity

Fast Path Activity monitors provide performance data about IMS Fast Path resource usage.

Table 12. IMS Workload Monitors for Fast Path Activity

View	Monitor	Description
I#CIC	#CIC	Reports the number of workload Fast Path database control interval contentions (CIC) during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of CICs for the total workload or a single workload type.
I#OBAW	#OBAW	Reports the number of overflow buffer (OBA) latch waits for selected workloads during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of OBA waits by Fast Path transactions or a single workload type.
I@OBA	@OBA	Reports the average overflow buffer usage by Fast Path transactions for selected workloads during the sampling period. Depending on the parameters specified with the monitor, the reported value is the average overflow buffer usage for the total workload or a single workload type.

## Global Region Calls

Global Region Calls monitors provide performance data about all region calls issued during IMS application program processing, including DL/I calls issued by DBCTL regions.

Table 13. IMS Workload Monitors for Global Region Calls

View	Monitor	Description
I\$CBMP	\$CBMP	Reports the number of calls issued by BMP regions during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of all calls or the number of all calls of a single type.
I\$CDBT	\$CDBT	Reports the number of DL/I calls issued by DBCTL threads during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of all calls or the number of all calls of a single type.
I\$CTOT	\$CTOT	Reports the number of calls issued by all region types during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of all calls or the number of all calls of a single type.

## Elapsed Timing

Elapsed Timing monitors provide performance data about transaction elapsed, input, and response time.

Table 14. IMS Workload Monitors for Elapsed Timing

View	Monitor	Description
I@ELAP	@ELAP	Reports the average elapsed time of DBCTL threads. Depending on the parameters specified with the monitor, the reported value is the average transaction elapsed time for all workloads or for all workloads of a single type.



---

## IMS Resource Monitors

This section describes the views and monitors that provide performance plot displays about IMS:

- Regions/CICS threads
- Database activity
- Internals
- Interaction with OS/390
- IRLM

### IMS Regions/CICS Threads

IMS Regions/CICS Threads monitors provide performance data about DB2 access by programs executing in the IMS regions/CICS threads.

Table 15. IMS Resource Monitors for IMS Regions/CICS Threads

View	Monitor	Description
ID2CON	D2CON	Reports the number of IMS regions/CICS threads connected to DB2 during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of IMS regions/CICS threads connected to DB2 subsystems or the number connected to a specific DB2 subsystem.
ID2SON	D2SON	Reports the number of IMS regions/CICS threads that issued at least one SQL call and are signed on to DB2 during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of regions/CICS threads signed on to DB2 or the threads signed on to a specific DB2 subsystem.
ID2THD	D2THD	Reports the number of IMS regions/CICS threads with active threads to DB2 during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of active regions/CICS threads with DB2 threads or the regions/CICS threads with active threads to a specific DB2 subsystem.

## IMS Database

IMS Database monitors provide performance data about DL/I buffer pool activity.

Table 16. IMS Resource Monitors for Database Activity

View	Monitor	Description
IDBIO	DBIO	Reports the number of database I/O by subpool for the OSAM pool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the database I/O for the total OSAM pool or for one subpool.
IDBHIT	DBHIT	Reports the hit ratio for the OSAM buffer pool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the hit ratio for the entire OSAM buffer pool or for one subpool.
IDBSTL	DBSTL	Reports database buffer steal writes for the OSAM pool or by subpool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the database buffer steal writes for the total OSAM pool or for one subpool.
IHPACC	HPACC	Reports Hiperspace access for all VSAM buffer spools or by subpool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of successful Hiperspace reads and writes or by subpool.
IHPHIT	HPHIT	Depending on the parameters specified with the monitor, reports the hit ratio for all VSAM buffer spools or by subpool during the sampling period.
IHPSTL	HPSTL	Reports Hiperspace buffer steals by VSAM subpool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of unsuccessful reads from all VSAM Hiperspace buffer pools or a single subpool.
ISBUSE	SBUSE	Reports sequential buffering storage by thread during the sampling period. Depending on the parameters specified with the monitor, the reported value is kilobytes of virtual storage used by all threads, a group of threads, or a single thread.
IVDBIO	VDBIO	Reports VSAM database I/O by subpool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of I/Os for the total VSAM pool or one subpool.
IVDBWR	VDBWR	Reports VSAM writes by subpool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of VSAM-initiated writes for the total VSAM pool or one subpool.
IVHIT	VHIT	Reports the VSAM hit ratio by subpool during the sampling period. Depending on the parameters specified with the monitor, the reported value is the hit ratio for the total VSAM pool or one subpool.

## IMS Internals

IMS Internals monitors provide performance data about IMS internal activity for program isolation, pools, logging, latching, and pool allocation.

Table 17. IMS Internals Resource Monitors

View	Monitor	Description
IDBWP	DBWP	Reports the percentage of the database work area pool in use during the sampling period.
IDMBP	DMBP	Reports the percentage of the DMB pool in use during the sampling interval.
IDSAP	DSAP	Reports the percentage of the Dynamic Save Area pool in use during the sampling period.
IEPCB	EPCB	Reports the percentage of the extended PCB (EPCB) pool in use during the sampling period. If Fast Path is not installed in IMS, the IEPCB plot is always zero.
ILAWT	LAWT	Reports the average latch wait time in microseconds within the sampling period or since the last IMS checkpoint if a checkpoint occurs within the interval. Depending on the parameters specified with the monitor, the reported value is the average wait time for all latch types or a specific latch type.
IOBUFW	OBUFW	Reports the number of times that the IMS logical logger had to wait for a buffer to be written to the OLDS during the sampling period.
IOCHKW	OCHKW	Reports the number of check write requests to the IMS logical logger during the sampling period.
IPIENQ	PIENQ	Reports the number of program isolation (PI) enqueues held by CICS threads during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of PI enqueues held by all CICS threads or the number held by one thread or group of threads.
IPIPL	PIPL	Reports the percentage of the program isolation (PI) pool in use during the sampling period. PI pool percentage usage is calculated as the ratio of allocated bytes to the total number of bytes that can be assigned to the pool.
IPOOLA	POOLA	Reports the amount of allocated pool storage in bytes during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of allocated bytes of CSA storage, ECSA storage, or non-CBT pool storage.
IPOOLN	POOLN	Reports the difference in bytes between the total expansion and total compression of blocks allocated to non-CBT fixed storage pools.

Table 17. IMS Internals Resource Monitors (continued)

<b>View</b>	<b>Monitor</b>	<b>Description</b>
IPOOLT	POOLT	Reports the number of times that non-CBT storage pool blocks expanded and compressed during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total block expansions and compressions for all pools or the number for a specific non-CBT fixed storage pool.
IPSBP	PSBP	Reports the percentage of the PSB pool in use during the sampling interval. If the IMS option is ILSO=S, DLISAS PSB pool usage is monitored. If the LSO option is not S, total PSB pool usage is monitored.
IPSBW	PSBW	Reports the percentage of the PSB work area pool in use during the sampling period.
IWADIO	WADIO	Reports the number of EXCPs to a WADS data set during the sampling interval. If dual WADS logging is in effect, the actual number of EXCPs is twice the reported number.
IWKAP	WKAP	Reports the percentage of the general work area pool in use during the sampling period.

## IMS Interaction with OS/390

IMS Interaction with OS/390 monitors provide performance data about OS/390 resources used by IMS interaction with OS/390.

Table 18. IMS Resource Monitors for OS/390

View	Monitor	Description
ICSAUT	CSAUT	Reports the percentage of CSA storage in use during the sampling period.
IDLIO	DLIO	Reports the number of successful EXCPs for DL/I data sets allocated to the DLISAS region during the sampling period by ddname. Depending on the parameters specified with the monitor, the reported value is the total EXCPs for all data sets allocated to the IMS DLISAS region, a group of data sets, or a single data set.
IDPAGE	DPAGE	Reports the number of demand page-ins by IMS region/CICS thread during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total demand page-ins for the system or demand page-ins for one IMS region/CICS thread.
IECSAU	ECSAU	Reports the percentage of extended CSA storage in use during the sampling period.
ISYSIO	SYSIO	Reports the number of successful EXCPs for data sets allocated to the IMS control region by ddname. Depending on the parameters specified with the monitor, the reported value is the total EXCPs for all data sets allocated to the IMS control region or the EXCPs for one data set or group of data sets allocated to IMS.

## IRLM

IRLM monitors provide performance data about IRLM activity.

Table 19. IMS Resource Monitors for IRLM

View	Monitor	Description
ILDLCK	LDLCK	Reports the number of IRLM deadlocks that occurred during the sampling period.
ILHELD	LHELD	Reports the number of IRLM locks held by an IMS region/CICS thread during the sampling period. Depending on the parameters specified with the monitor, the reported value is the total number of IRLM locks held by the target IMS or by a specific thread/CICS thread.
ILKREQ	LKREQ	Reports the number of IRLM lock requests that occurred during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of lock requests for the entire IRLM system or the subset from the target IMS.
ILSUSP	LSUSP	Reports the number of IRLM suspensions that occurred during the sampling period.
ILWNUM	LWNUM	Reports the number of suspended IRLM requests that occurred during the sampling period. Depending on the parameters specified with the monitor, the reported value is all suspended requests from the current target IMS, all suspended requests from all targets, or all requests suspended longer than a specified number of seconds from all targets or the current target.
IPTBLK	PTBLK	Reports the number of IRLM lock requests (IRLM 1.5 only) that resulted in a PTB process during the sampling period. Depending on the parameters specified with the monitor, the reported value is the number of lock requests for the entire IRLM system or the subset from the target IMS.
IVSEND	VSEND	Reports the number of VTAM sends issued by the IRLM system (IRLM 1.5 only).

---

## Chapter 8. Creating IMS Workload Definitions

This chapter describes how to create and maintain MAINVIEW for DBCTL (MVDBC) workload definitions, which you can use to define performance objectives for your mission critical applications.

---

### Elements of a Workload Definition

A dialog box is used to create or modify IMS workload definitions. You fill in fields in the dialog box with values that describe each workload. The elements of a workload definition are summarized in the following sections and are described in more detail on page 111.

#### Workload and Composite Names

A workload name and composite name are assigned to each workload. All workloads that share the same composite name are grouped into “applications.” If your site has MAINVIEW VistaPoint installed, you can use a shared composite name to combine the performance of workloads running in IMS, CICS, DB2, and OS/390 into a common application so that you can view the performance of workloads sharing common tasks.

#### Service-Level Objectives

A service-level objective is defined for each workload. The objective specifies the acceptable performance for a workload. The objective is met if a specified percentage of a workload’s transactions completes within a specified elapsed time.

#### Monitoring Time Range

Start and end time fields are used to specify a monitoring time period for each workload.

#### Target ID and System ID

If you want to limit a workload to specific IMS or OS/390 systems, you can include an IMS target ID, an OS/390 system ID, or both.

#### Workload Resource Fields

Workloads can be qualified by transaction ID, class, program name, PSB name, region job name, region ID, LTERM name, IMS user ID, and transaction type.

---

## Planning IMS Workload Definitions

Before you create workload definitions, you should

- establish conventions for the workloads
- define the workload service-level objectives for each workload
- identify a critical monitoring period for each workload

## Establishing Workload Conventions

IMS workload definitions are saved in BBPARM member BBFTWK00. To minimize maintenance time, the BBPARM data set with the BBFTWK00 member should be shared by all MVDBC product address spaces. Otherwise, duplicate workload definitions must be created and maintained.

Establishing logical, consistent conventions for workload and composite names is important, especially if all your workload definitions are not stored in a shared BBPARM data set. If you must use multiple BBPARM data sets for workload definitions, maintaining the definitions is much easier if you can quickly identify similar workloads.

### Workload Names

The information in MVDBC Plex views can be sorted and filtered by workload name. Consistent workload names make it easier to sort and filter views to find the information that you want to display.

Workload names can be up to eight characters long, and the names should clearly represent the work performed by the target IMS. For example, the workload name IMSPAY could be used for IMS payroll transactions.

### Composite Names

Composite names should represent a common function of the workloads that are part of a MAINVIEW VistaPoint application. For example, a workload composite with the name FINANCE indicates that a workload is part of the financial application. Composite names can be up to eight characters long.

## Defining Workload Service-Level Objectives

A service-level objective specifies the acceptable performance of a workload. You set a service-level objective based on your assessment of the minimum percentage of transactions that must complete within an elapsed response time for the tasks that occur in a workload.

Workloads that belong to the same composite can have different service-level objectives. MVDBC and MAINVIEW VistaPoint normalize reported values to maintain consistency.



## Identifying Critical Workload Monitoring Periods

There are periods of time when transaction performance is critical for a particular application, and there are other times, perhaps during the night, when performance is less critical. You can define a single workload to monitor only during an application's critical time period, or you can define multiple workloads for the application, with different monitoring periods and response time goals.

All workloads that belong to the same composite workload should have identical monitoring periods. If they have different monitoring periods, views that show combined workload performance might display misleading information.

## Creating a New Workload Definition

After you establish the appropriate naming conventions, service-level objectives, and monitoring period, you can create a workload definition by completing the following steps:

1. Access the IWKLDDDEF view and change the view status from browse to edit mode.
2. Open the Add IMS Workload Definition dialog box to add a workload.
3. Assign the workload definition settings in the dialog box.
4. Save and install the workload definition.

## Accessing the IWKLDDDEF View

The IWKLDDDEF view, shown in Figure 76, is the starting point for defining an IMS workload.

22MAR2002 16:17:39 ----- MAINVIEW WINDOW INTERFACE(R4.0.01)-----									
COMMAND ==>					SCROLL ==> CSR				
CURR WIN ==> 1					ALT WIN ==>				
>W1 =IWKLDDDEF=====I7AM31CT=*===== (00 BROWSE )====MVIMS====D=====2									
CMD	Workload	Composite	Target	System	Description	Sta Resp %Tr			
---	Name---	Name-----	-----	-----	-----	-----			
	IMSPAY	FINANCE	IMS15A	*	Accounts payable	Act	0.30	90	
	IMSREC	FINANCE	IMS15A	*	Accounts receivable	Act	0.30	90	
	IMSRET	FINANCE	IMS15A	*	Accounts return	Act	1.00	95	
	IMSTEST	TEST0131	IMS*	*	IMS testing	Act	0.30	95	

Figure 76. IWKLDDDEF Workload Definition List View, Browse Mode

To access the IWKLDDDEF view, you can

- type IWKLDDDEF on any command line
- type ADMIN on any command line and select the IWKLDDDEF view
- type VIEWS on any command line and select the IWKLDDDEF view

To add a workload definition (or change an existing workload definition), you must switch from browse mode to edit mode by typing **EDIT** on the IWKLDDDEF command line and pressing Enter. An edit lock is set on BBPARM member BBFTWK00, and the IWKLDDDEF view is displayed with edit mode indicated in the view information line, as shown in Figure 77 on page 110.

```

22MAR2002 16:17:39 ----- MAINVIEW WINDOW INTERFACE(R4.0.01) -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IWKLDDDEF=====I7AMB1CT=*===== (00 EDIT          )====MVIMS====D====2
CMD Workload Composite Target System Description Sta Resp %Tr
--- Name----- Name-----
IMSPAY FINANCE IMS15A * Accounts payable Act 0.30 90
IMSREC FINANCE IMS15A * Accounts receivable Act 0.30 90
IMSRET FINANCE IMS15A * Accounts return Act 1.00 95
IMSTEST TEST0131 IMS* * IMS testing Act 0.30 95

```

Figure 77. IWKLDDDEF Workload Definition List View, Edit Mode

The primary commands and line commands provided in the IWKLDDDEF view are listed in Table 20 on page 113.

**Note:** If someone else is editing the BBFTWK00 member when you type the EDIT command, you will get an error message telling you that the member is not available.

## Opening the Add IMS Workload Definition Dialog Box

There are two ways you can open the Add IMS Workload Definition dialog box to add a new workload definition. You can use the default workload definition settings or the settings of an existing workload as a basis for the new workload definition.

- Type the **ADD** primary command on the IWKLDDDEF command line to open the dialog box with the default workload definition settings.
- Type the **ADD** line command beside an existing workload to open the dialog box using the selected workload's settings and then specify a new workload name.

The Add IMS Workload Definition dialog box with default settings is shown in Figure 78.

```

----- ADD IMS WORKLOAD DEFINITION -----
COMMAND ==>

Workload ==>
For Target ==> *
Description ==>

Composite ==>
For System ==> *

Tran Id ==>
Class ==>
Program ==>
PSB ==>
Region ==>
RegionID ==>
Terminal ==>
User id ==>
TranType ==> (DLI, DB2, FP) PgmType ==> (MPP, MDP, TPI, DBT, NOTDBT)

Response time of ==> 1.0 seconds for ==> 100 % of transactions
Between ==> 00:00 (hh:mm) and ==> 24:00 (hh:mm)
Include Queuing ==> Y (Y, N)

```

Figure 78. Add IMS Workload Definition Dialog Box

**Note:** The primary commands available in the workload definition dialog box are listed in Table 21 on page 113.

## Assigning the New Workload Definition Settings

This section describes the fields used to create a workload definition. For more information about the fields, press your help key to access the online help.

### Workload and Composite Names

Enter the selected names for the workload and composite. Workload and composite names can be up to eight characters long, but the first character in each name must be an alpha character.

The composite workload name is used by MAINVIEW VistaPoint to combine workloads into a single application. Related IMS, CICS, DB2, and OS/390 workloads must have the same composite name if you want to monitor their combined transaction performance in a MAINVIEW VistaPoint application.

Workload name and composite name are required fields. If you do not enter a composite name, the workload name is automatically assigned as the composite name when you save the workload definition.

For information about choosing workload and composite names, see page 108.

### Target and System IDs

Enter the complete target ID if you want to restrict the workload to a single IMS system, and enter the system ID if you want to restrict the workload to a single OS/390 system.

You can use wildcards (\*, ?, and +) to expand a definition to include multiple IMS targets and OS/390 systems.

Target and system ID are required fields. If no ID is specified in a field, the field must contain an asterisk.

### Description

Enter a description that defines the purpose of the workload. The description is a required field, and it can be up to 24 characters long.

### Monitored IMS Resources

You can use the resource fields to restrict a workload by transaction ID, class, program name, PSB name, region job name, region ID, LTERM name, IMS user ID, transaction type, and program type. The resource fields are optional.

You can use the wildcards \*, ?, and + to expand a definition for the transaction ID, class, program, PSB, region job name, and region ID fields.

You can use multiple entries, separated by a comma or a space, for the transaction ID, program, PSB, region job name, terminal, and user ID fields.

## Response Time and Percent of Transactions Fields

These two fields define the service-level objective for the workload. In the response time field, enter the response time goal for transactions that occur within the workload target. In the percentage field, enter the minimum percentage of transactions that must complete within the specified response time. The service-level objective is met if the specified minimum percentage of a workload's transactions complete within the specified response time.

These fields are required. If you are creating a workload definition from scratch and enter no values in the fields, the default response time of 1.0 seconds and the default percentage of 100% will be used for the workload definition.

## Include Queuing

The queuing field specifies whether a workload's transaction response time will include the time transactions spend in the input queue waiting to be processed.

## Saving and Installing a New Workload Definition

After you define a new workload in the Add IMS Workload Definition dialog box, you can add the workload to the current workload list by typing the SAVE command in the dialog box command field.

When you return to the IWKLDDEF view, the new workload is included in the workload list with an inactive status and the view mode is changed from EDIT to EDIT MOD, indicating that changes to the workload list are pending. At that point, you can

- type SAVE in the command field to save the definition in inactive status and keep the IWKLDDEF view open
- type END in the command field to save the definition in inactive status and return to the previous view
- type SAVE in the command field and then type INStall in the line command area beside the new workload (or vice versa) to activate the new workload and save it in the workload list
- type INStall in the line command area beside the new workload to activate it without saving it

The INStall line command immediately updates the local BBI-SS PAS, and monitoring begins for a new workload as soon as its status changes from inactive to active.

You can create a new workload for temporary use by installing it without saving it in the workload list. When you no longer need the workload, you can delete it before you save the workload list.

## Commands in the IWKLDDEF View and the IMS Workload Definition Dialog Boxes

Table 20 lists the primary commands and line commands available in the IWKLDDEF view, and Table 21 lists the primary commands available in the dialog boxes for adding and changing workload definitions.

Table 20. Primary and Line Commands on the IWKLDDEF View

Primary Commands	Function
EDIT	Changes the view from browse mode to edit mode, activating the other primary and line commands.
ADD	Opens the Add IMS Workload Definition dialog box with default workload settings.
CANcel	Cancels any changes made to the workload list during an edit session by restoring the workload list to the current version in storage (ends the edit mode and returns the view to browse mode).
SAVE	Saves any changes made to the workload list and maintains the edit mode.
Line Commands	Function
ADD	Opens the Add IMS Workload Definition dialog box with the settings for the selected workload definition. You can specify a new workload name and use the settings of the selected workload as a template for a new workload definition.
CHA	Opens the Change IMS Workload Definition dialog box with the settings for the selected workload definition.
DEL	Removes a workload from the view and changes its status to deleted.
INS	Activates a workload with a modified or inactive status (and changes the workload's status to active).
PARM DELETED(*)	Redisplays deleted workloads in a different color if the workload list was not saved after the deletions were made.
UND	Changes the status of a workload from deleted to the status in effect when the DEL line command was entered against the workload

Table 21. Primary Commands on the Dialog Boxes for Adding and Changing IMS Workload Definitions

Primary Command	Function
END	Saves the workload settings and closes the dialog box.
CANcel	Cancels a new workload or changes made to an existing workload and closes the dialog box.
SAVE	Saves the workload settings.

---

## Maintaining Workload Definitions

This section describes how to update, delete, and recover workload definitions.

### Changing a Workload Definition

To change settings for a workload

- access the IWKLDDEF view
- change browse mode to edit mode (by typing EDIT on the command line)
- type CHA in the line command area beside the workload you want to change

The CHA change line command opens the Change IMS Workload Definition dialog box with the current settings for the workload. You can then change any field in the dialog box except the workload name field.

After you change the definition, you can either enter the CANCEL command to discard the changes or enter the END command to keep the changes intact. Both commands close the dialog box.

When you change a workload's settings and use the END command to close the Change IMS Workload Definition dialog box, the updates you made are pending. If the workload was in active status, its status is changed to modified (Mod); if it was in inactive status, its status remains inactive. The window information line shows an EDIT MOD status, which means that there are one or more unsaved workload modifications pending.

In the IWKLDDEF view, you can cancel or save changes you made to a workload definition. If you enter the CANCEL primary command, all changes made and not saved are discarded and the view mode changes from EDIT MOD mode to BROWSE mode. If you enter the SAVE primary command, all changes are saved, the IWKLDDEF view remains open, and its mode changes from EDIT MOD to EDIT. If you enter the END command, all changes are saved and the previous view is displayed.

You must install a modified workload definition to activate the changes. When you install the modified workload definition, the original workload is deactivated, and transaction monitoring begins immediately with the updated workload definition, if the current time is within the monitoring time period of the workload. If the current time is not within the workload's monitoring time period, transaction monitoring will begin when the start time is reached.

## Deleting and Recovering Workload Definitions

To delete a workload definition

- access the IWKLDDEF view
- change browse mode to edit mode (by typing EDIT on the command line)
- type DEL in the line command area beside the workload you want to delete

When you enter the DEL line command, the workload definition disappears from the definition list, and its status is changed to deleted. If you enter the SAVE or END command, the workload is permanently deleted and cannot be retrieved.

If you have deleted a workload with the DEL line command and you have not saved the workload list with the SAVE or END command, you can retrieve the deleted workload by entering PARM DELETED(\*) on the command line.

When you enter the PARM DELETED(\*) command, the workload reappears in the workload list and is displayed in a different color. To recover the workload, enter the UND undelete line command in its line command area. The undelete command changes the color of the workload line to normal and changes its status from deleted to the status in effect when the DEL line command was entered against the workload.





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## Part 3. Solving Realtime Problems

This part describes how you can use the MAINVIEW for DBCTL IPSM views to analyze and solve realtime problems. For general information about views, see the *Using MAINVIEW* manual.

<b>Chapter 9. Monitoring Region/Thread Activity</b>	<b>119</b>
Accessing the Region Activity Views	120
Region Activity Summary View	121
Region Activity Detail View	123
Region Activity DL/I View	125
Region Activity Fast Path View	126
Region/Program View	127
Region Activity Program Isolation (PI) View	129
 <b>Chapter 10. Recognizing and Resolving N-Way Data Sharing Resource</b>	
<b>Contention</b>	<b>131</b>
Accessing the IRLM Lock Views	132
Analyzing Lock Problems	132
Region Lock Summary View	133
Region Lock List View	135
Region Lock Wait List View	137
Resource Lock Summary View	138
Resource Lock List View	140
Resource Lock Wait List View	142



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## Chapter 9. Monitoring Region/Thread Activity

This chapter shows you how to use the IPSM sysplex-enabled region views to monitor the activity of CICS threads and BMPs running under the target system. The views help you answer the following questions:

- What CICS thread activity is occurring?
- What work is IMS performing for currently processing transactions?
- What is the activity of this transaction?

The IPSM sysplex-enabled region views represent a powerful upgrade over previous REGNS views. They allow you to monitor the activity of groups of CICS threads in one or many different DBCTL systems.

Built in the MAINVIEW window environment, these views also give you powerful usability enhancements. You can filter, sort, and customize to produce views that focus on exactly what you need to see and that present information the way you need to see it.

The IPSM region views are as follows:

View name	Description
<b>DRGNSUMR</b>	Region Activity Summary
<b>DRGNDTLR</b>	Region Activity Detail
<b>DRGNDLIR</b>	Region DL/I Activity
<b>DRGNFPLR</b>	Region Fast Path Activity
<b>DRGNPGMR</b>	Region/Program Activity
<b>DRGNPILR</b>	Region Activity Program Isolation (PI)

## Accessing the Region Activity Views

To access the region activity views, you can use the IPSM hyperlinks. These hyperlinks connect directly to the sysplex-enabled region views. You can also display the generic, unfiltered version of each view by simply typing the view name on any command line within the IPSM product.

To display filtered versions of these views, hyperlink from any of the DBCTL Easy Menus (EZIFAST, EZIMS, EZISSI, EZISSR) or the appropriate fields within their pop-up submenus. (To display an Easy Menu, type its name on any command line within the IPSM product.)

The easiest way to access the regions views is by hyperlinking from either the Active Threads option or the Waiting Threads option of the DBCTL Easy Menu (EZIMS), shown in Figure 79.

```
22MAR2002 14:14:41 ----- INFORMATION DISPLAY -----
COMMAND ===>
CURR WIN ===> 1          ALT WIN ===>
W1 =EZIMS=====IMS71X==*=====22MAR2002=14:14:41====MVIMS====D====1
                                DBCTL EASY MENU
                                Timeframe - Interval

(Change) Target---> IMS71X          Status: INACTIVE
Activity          +-----+
. System          | Place cursor on |
. Threads          | menu item and  |
. Threads Not Idle| press ENTER   |
. Thread Occupancy+-----+
. Batch Regions
. Database Activity

Transaction Analysis      Cross Reference
. Delay Factors          . Programs/Databases
. Components of Response . Databases/Programs
. Traces

Exceptions
. Current Delays
. Database Lock Waits
. Waiting Threads
. Stopped Programs
. Stopped Databases
. Stopped Areas
. Alarms in Exception

Monitors
. In Warning
. Active
. Workload Objective
. Area Summary

Tools and Menus
> Utilities
> IMS Fast Menu
> IMS SSI Menu
> MVIMS Main Menu
. Installed Products
. Return
```

Figure 79. DBCTL Easy Menu (EZIMS)

# Region Activity Summary View

A good starting point for monitoring dependent regions is the Region Activity Summary view (DRGNSUMR), shown in Figure 80 and Figure 81. This view provides information about active regions and the transactions that are currently executing. It shows

- Thread or BMP status
- UOW (unit of work) elapsed time
- CICS task ID, transaction name, and user name
- Total number of locks held by the thread
- Number of DL/I and SQL calls made

Data is collected from your entire IMSplex environment, enabling you to monitor activity of multiple CICS threads across one or more OS/390 systems.

To display an unfiltered version of this view, type DRGNSUMR on any command line within the IPSM product. To display a filtered view, hyperlink from any of the following Easy Menus: EZIFAST, EZIMS, EZISSI, EZISSIR. (To display one of these Easy Menus, type its name on any command line within the IPSM product.)

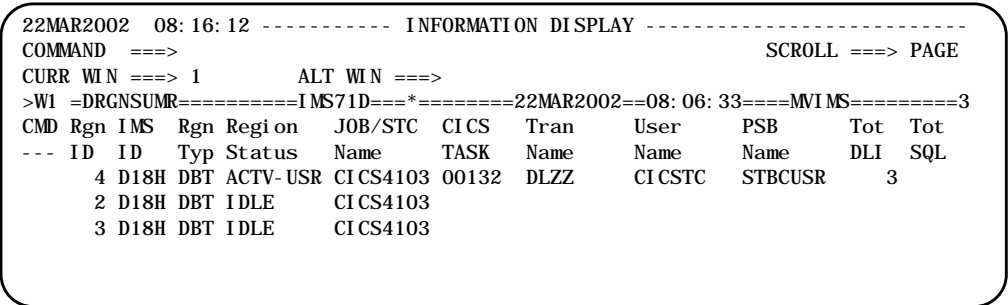


Figure 80. Region Activity Summary View (DRGNSUMR)

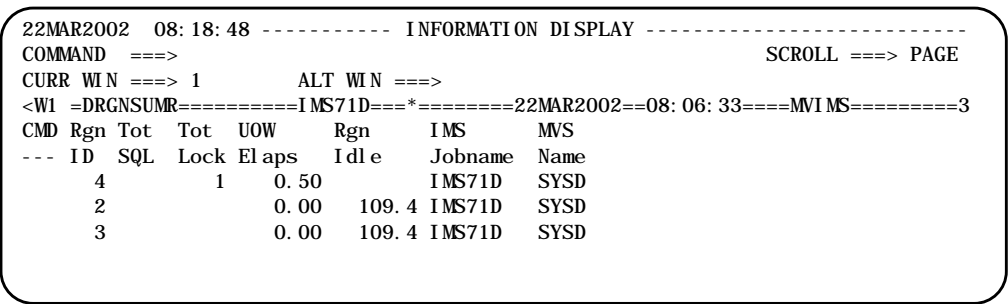


Figure 81. Region Activity Summary View, Scrolled Right

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

This high-level, tabular view provides hyperlinks to more detailed region views.

The following hyperlinks are provided in the DRGNSUMR view.

Hyperlink from	To see
Rgn ID	Region Detail view (DRGNDTLR), which provides detailed thread information
Tot DLI	Region Activity DL/I view (IRGNDLIR), which provides DL/I call detail information
Tot Lock	IRLM or PI Lock Detail view, which provides detailed lock information

To display an unfiltered version of this view, enter IRGNSUMR on any command line within the IPSM product. To display a filtered view, hyperlink from any of the following Easy Menus: EZIFAST, EZIMS, EZISSI, EZISSIR. (To display one of these Easy Menus, enter its name on any command line within the IPSM product.)

## Region Activity Detail View

The Region Activity Detail view (DRGNDTLR), shown in Figure 82, displays detailed CICS thread or BMP information. It shows you what a transaction is doing. You can see

- Which databases a transaction accesses and how often
- How many times a transaction accesses a database and with what type of DL/I call
- Number of locks held by a BMP between checkpoints
- The transaction's resource usage

To display this view, select a region from the Rgn ID field in the Region Activity Summary view (DRGNSUMR).

22MAR2002 08:19:17 ----- INFORMATION DISPLAY -----									
COMMAND ==>>					SCROLL ==> PAGE				
CURR WIN ==>> 1					ALT WIN ==>>				
>W1 =DRGNDTLR=====IMS71D==*=====22MAR2002==08:06:33====MVIMS=====1									
Region ID. . .		4	Rgn Status. .		ACTV-USR	UOW Elap. . . .		0.5	
Job Name. . .		CICS4103	Tran Name. . .		DLZZ	Idle Time. . . .		0.0	
IMS ID. . . . .		D18H	PSB. . . . .		STBCUSR	AGN. . . . .			
MVS Name. . .		SYSD	User. . . . .		CICSTC	DB2 AUTHID. . .		CICSTC	
DB Shr Grp.			CICS Task. . .		00132	DB2 Stat. . . .			
Region Type		DBT				Seq BF Usg. . .		0	
----- DL/I Call--- ACTIVITY -----									
Total Calls		3	Current/Last		DLI Call	Current Lock Detail (PI)			
PI Activity.									
INIT. . . . .		0	SETO. . . . .		0	APSB. . . . .		0	
INQY. . . . .		0	SETS. . . . .		0	DPSB. . . . .		0	
AUTH. . . . .		0	SETU. . . . .		0	DB DEQ. . . . .		0	
CHKPT. . . . .		0	ROLB. . . . .		0				
XRST. . . . .		0	ROLS. . . . .		0				
----- FAST PATH--- ACTIVITY -----									
NBA. . . . .		0	OBA. . . . .		0	Used. . . . .		0	
Lock Detail									
----- DB2----- ACTIVITY -----									
DB2 Name. . .			Control. . . . .		0	SQL Total. . .		0	
Plan Name. .			Dynamic. . . . .		0	Inserts. . . . .		0	
SEL/FETCH. .		0	DDL. . . . .		0	Deletes. . . . .		0	
Opens. . . . .		0	Other. . . . .		0	Updates. . . . .		0	
----- PSB -----									
PSB Size. . .		888	PSB WA. . . . .		2288				
----- SYSTEM----- ACTIVITY -----									
Exec In. . . .		DBT	TCB CPU. . . . .		26	Elapsed Days			
ASID. . . . .		83	SRB CPU. . . . .		4	and Hours. . .		01:49:27	
Priority. . . .		254	CPU SRV. . . . .		12180	Domain. . . . .		0	
Swap. . . . .		NON-SWAP	IO SRV. . . . .		540	Perf Group. . .		0	
			MSO SRV. . . . .		59280	Perf Period. .		0	
----- PAGING----- ACTIVITY -----									
Work In. . . .		0	Int Pg-ins. . .		44	VIO Pg-ins. . .		0	
Work out. . .		0	Int Pg-outs. .		0	VIO Pg-outs. .		0	
Frames. . . .		0	Int Reclai ms		0	VIO Reclai ms		0	
Slots. . . . .		932	Swap Count. .		1	VIO Slots. . .		0	
ComPg-ins. .		1	ComReclai ms		0	Int Stolen. .		2893	

Figure 82. Region Activity Detail View (DRGNDTLR)

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

The Region Activity Detail view also provides hyperlinks to enable you to directly access additional information.

The following hyperlinks are provided in the DRGNDTLR view.

Hyperlink from	To see
Region Type	MAINVIEW for CICS TASKXPND views (if region type is DBCTL)
Total Calls	Region Activity DL/I view (DRGNDLIR)
Current/Last DLI Call	MAINVIEW for DBCTL DLIST views
Current Lock Detail	IRLM or PI Lock Detail views
DB2 Name	MAINVIEW for DB2 DUSER views (if appropriate)



# Region Activity DL/I View

The Region Activity DL/I view (DRGNDLIR), shown in Figure 83 and Figure 84, shows the amount of DL/I call activity incurred by the transaction currently executing.

This view shows the total number of DL/I database calls issued by a transaction against a database. Separate totals are given for GET UNIQUE, GET NEXT, GET HOLD UNIQUE, GET HOLD NEXT, REPLACE, INSERT, and DELETE calls.

The view also shows the total number of key reads and writes and non-key reads and writes. Sysplex information is provided: OS/390 name, IMS ID, region ID.

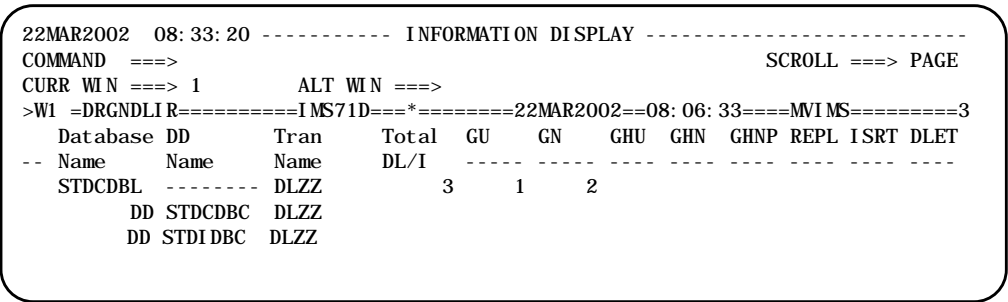


Figure 83. Region Activity DL/I View (DRGNDLIR)

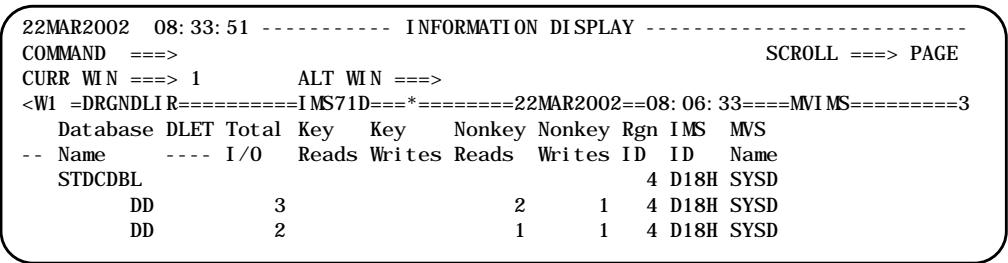


Figure 84. Region Activity DL/I View, Scrolled Right

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

To display an unfiltered version of the view, type DRGNDLIR on any command line within the IPSM product and press Enter. To see information for a selected CICS thread only, hyperlink to the view from the DB Calls field in the Region Activity Detail view (DRGNDTLR).

# Region Activity Fast Path View

The Region Activity Fast Path view (DRGNFPLR), shown in Figure 85, shows Fast Path call activity for the transaction currently processing in the selected CICS thread.

This view displays the first ten Fast Path database enqueues held by the selected region. Each record shows the Fast Path database area being accessed by the transaction, the enqueue type, and the RBA for the IMS resource being locked.

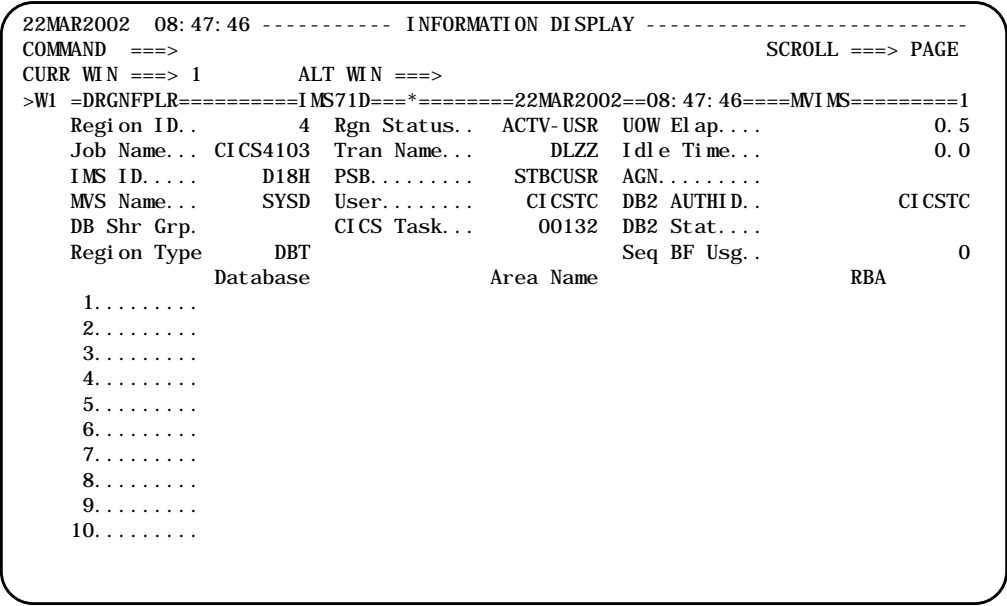


Figure 85. Region Activity Fast Path View (DRGNFPLR)

This view provides a hyperlink from the Rgn Type field to the MAINVIEW for CICS TASKXPND views (if the region type is DBCTL).

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

# Region/Program View

The Region/Program view (DRGNPGMR), shown in Figure 86 and Figure 87, allows you to monitor the activity of multiple CICS threads across one or more OS/390 systems. Data can be collected from your entire IMSplex environment.

This view provides information about

- Active regions
- The transactions currently executing in each region
- Associated application programs

To display an unfiltered version of this view, type DRGNPGMR on any command line within the IPSM product. To display a filtered view, hyperlink from any of the following Easy Menus: EZIFAST, EZIMS, EZISSI, EZISSIR. (To display one of these Easy Menus, type its name on any command line within the IPSM product.)

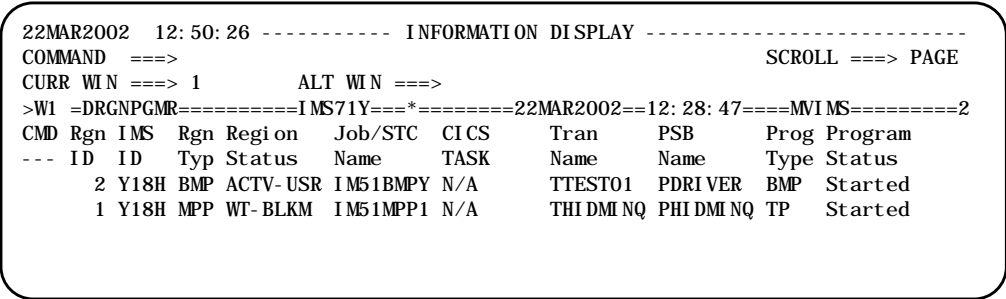


Figure 86. Region/Program View (DRGNPGMR)

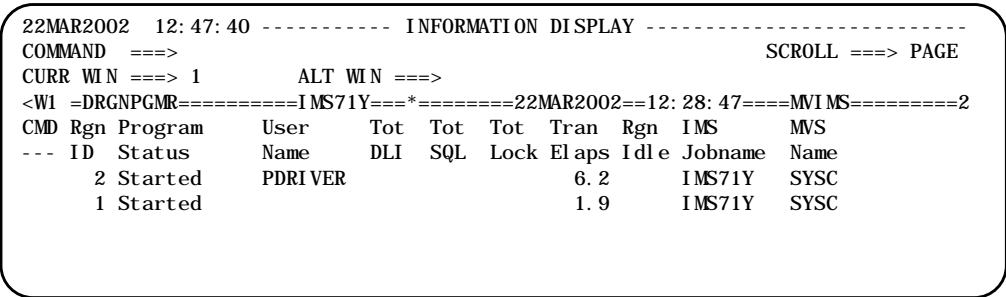


Figure 87. Region/Program View, Scrolled Right

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

This high-level, tabular view provides hyperlinks to more detailed region views.

The following hyperlinks are provided in the DRGNPGMR view.

Hyperlink from	To see
Rgn ID	Region Detail view (DRGNDTLR), which provides detailed thread information
Tot DLI	IPSM Region Activity DL/I view (DRGNDLIR), which provides DL/I call detail information
Tot Lock	IRLM or PI Lock Detail view, which provides detailed lock information

# Region Activity Program Isolation (PI) View

The Region Activity Program Isolation (PI) view (DRGNPILR), shown in Figure 88, is a detail view showing program isolation (PI) statistics for a selected DBCTL unit of work (UOW) or BMP.

The program isolation statistics in this view show you the amount and type of segment-locking activity that an application is performing.

To display an unfiltered version of this view, type DRGNPILR on any command line within the IPSM product. To display a filtered view, hyperlink from any of the following Easy Menus: EZIFAST, EZIMS, EZISSI, EZISSIR. (To display one of these Easy Menus, type its name on any command line within the IPSM product.)

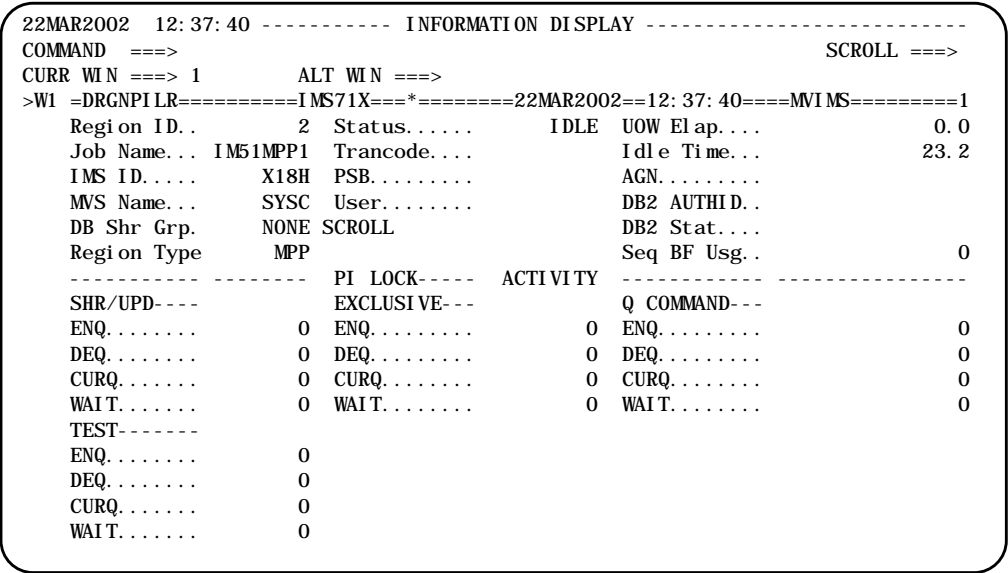


Figure 88. Region Activity Program Isolation (PI) View (DRGNPILR)

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.



---

## Chapter 10. Recognizing and Resolving N-Way Data Sharing Resource Contention

This chapter discusses the sysplex-enabled IRLM lock views provided for users operating in the MAINVIEW for DBCTL IPSM environment.

IPSM IRLM lock views make the task of recognizing and resolving N-way data sharing resource contention much easier. These views make it easy to answer the following questions:

- Is there a problem?
- How severe or widespread is it?
- Which resources are most contended for?
- How do I resolve the problem?

With views like the Resource Lock Summary view, you can quickly see which database resources are most contended for. The degree of contention is quantified in fields showing the number of threads waiting, longest wait times, and average wait times.

All views can be filtered on your most important criteria. Built in the MAINVIEW window environment, IPSM sysplex-enabled IRLM lock views give you powerful usability enhancements. You can filter, sort, and customize to produce views that focus on exactly what you need to see and to present information the way you need to see it.

The following IRLM lock views are provided:

View name	Description
<b>ILKRGSUM</b>	Region Lock Summary
<b>ILKRGLST</b>	Region Lock List
<b>ILKRGWT</b>	Region Lock Wait List
<b>ILKRSSUM</b>	Resource Lock Summary
<b>ILKRSLST</b>	Resource Lock List
<b>ILKR SWT</b>	Resource Lock Wait List

---

## Accessing the IRLM Lock Views

You can display any of the IRLM lock views described in this chapter by typing the view name on the command line, or by typing VIEWS and then selecting the view from the list presented.

You can also hyperlink to the IRLM lock views from the DBCTL Easy Menu (EZIMS) or Fast Menu (EZIFAST).

---

## Analyzing Lock Problems

A good way to begin analyzing lock problems is by looking at the Wait Time field in ILKRGWT view. This field shows you the extent of any problems that may exist (for example, how long the waiters for a resource have been waiting).

To investigate a long wait time, you can hyperlink from the Wait Time field. This takes you to the Resource Lock List view (ILKRSLST). The Resource Lock List view shows you who holds the resource that is being waited for and who else may be waiting for it.

The cause of a problem may be that the holder of the resource is also waiting for another resource. To see what the holder is waiting for, hyperlink from the holder's Hold Time field. This will take you to a list of all locks held or waited for by that particular holder.

If you wish to investigate further, hyperlink from the holder's Wait Time field. You now see who holds the resource that the holder is waiting for. If desired, this process can be repeated until you find the original cause of the problem.



# Region Lock Summary View

The Region Lock Summary view (ILKRGSUM), shown in Figure 89 and Figure 90, displays a list of all CICS threads that are waiting for or holding database locks. Threads with the longest wait times are shown first. This view shows

- Every thread that
  - holds a resource lock
  - is waiting for a resource lock
- How long a thread has been
  - holding a lock
  - waiting for a lock
- How many resource locks the thread holds
- How long the longest currently held lock has been held

You can use this view to see all threads currently using IRLM resources. To display this high-level view, type ILKRGSUM on any command line within the IPSM product.

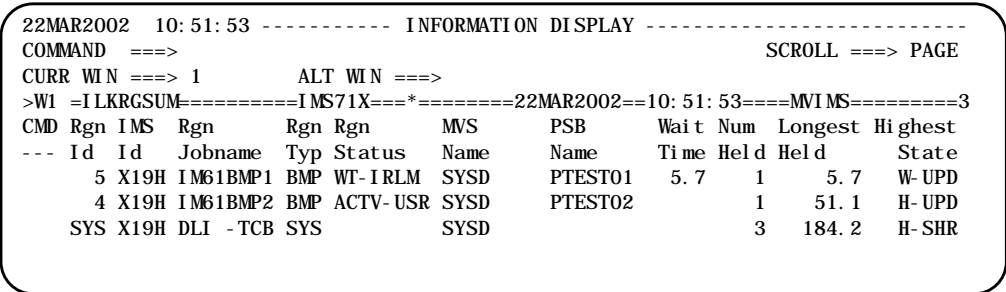


Figure 89. Region Lock Summary View (ILKRGSUM)

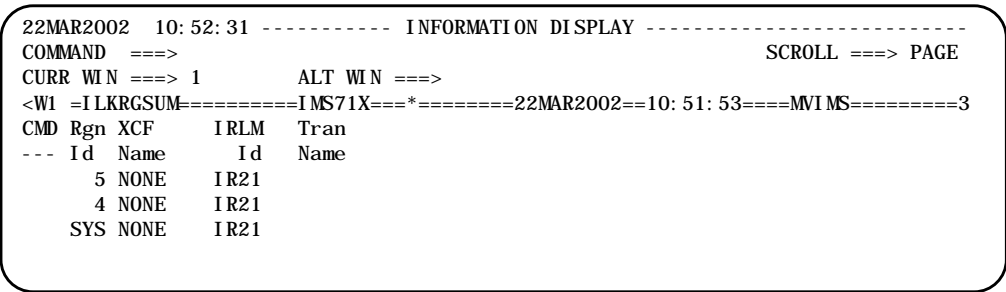


Figure 90. Region Lock Summary View, Scrolled Right

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

The following hyperlinks are provided in the ILKRGSUM view.

Hyperlink from	To see
Rgn Jobname	Detailed threads information
Num Held	All resources held by a thread
Wait Time	Which resource is waited for
Wait Time, then Wait Time in ILKRSWT view	All holders of a resource

# Region Lock List View

The Region Lock List view (ILKRGLST), shown in Figure 91 and Figure 92, shows all locks held or waited for by all regions. Locks held or waited for are shown by region. The view shows

- Every resource lock
  - held by any thread
  - waited for by any thread
- How long the thread has been
  - waiting for the lock
  - holding the lock

To display the Region Lock List view, you can type the view name (ILKRGLST) on any command line within the IPSM product. If you hyperlink to this view from another view, the information is filtered according to certain criteria.

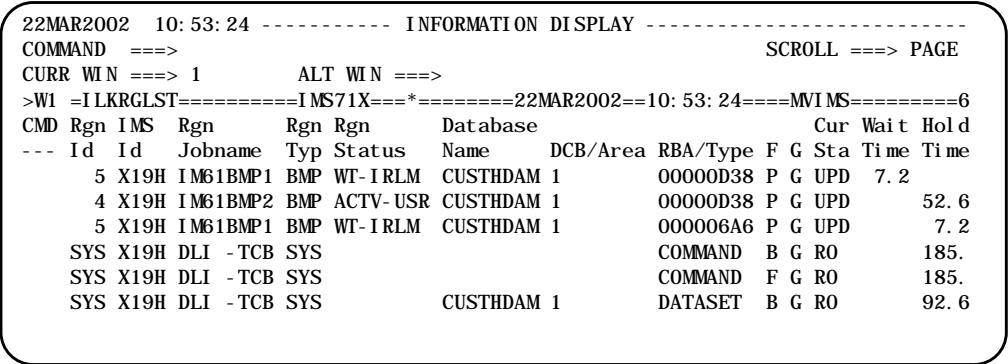


Figure 91. Region Lock List View (ILKRGLST)

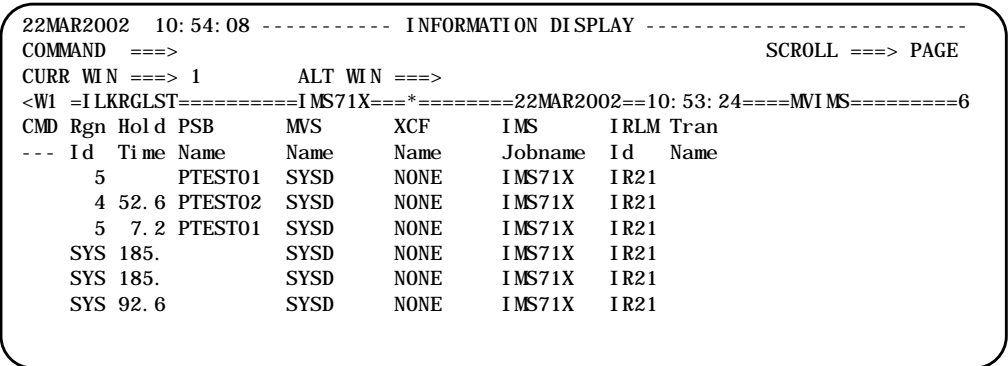


Figure 92. Region Lock List View, Scrolled Right

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

The following hyperlinks are provided in the ILKRGLST view.

Hyperlink from	To see
Wait Time	Resource Lock List view (ILKRSLST), where you can see all waiters and holders of a given resource
Hold Time	A filtered version of the Resource Lock List view (ILKRSLST), where you can see just the waiters of a given resource
Rgn Jobname	Region Activity Detail view (IRGNDTLR), where you can see what processing the region has done up until now

# Region Lock Wait List View

The Region Lock Wait List view (ILKRGWT), shown in Figure 93 and Figure 94, displays a list of all CICS threads waiting for database resource locks. Threads with the longest waits are shown at the top. The view shows

- Every resource lock waited for by any thread
- How long any thread has been waiting for any lock

This view is a good starting point for analyzing lock problems. It highlights problems and allows you to see their extent. By hyperlinking, you can find their cause.

To display the Region Lock Wait List view, you can type the view name (ILKRGWT) on any command line within the IPSM product, or you can hyperlink from the Number Waiters field of the Resource Lock Summary view (ILKRSSUM).

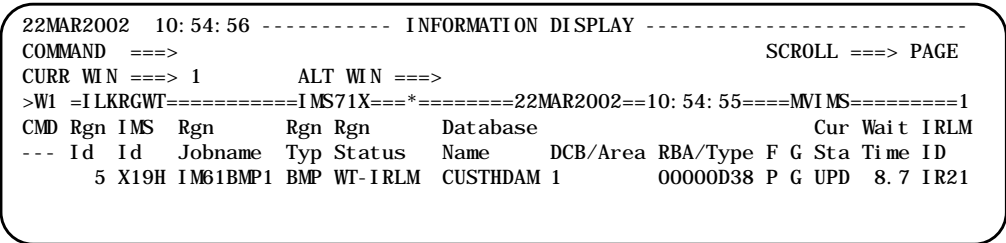


Figure 93. Region Lock Wait List View (ILKRGWT)

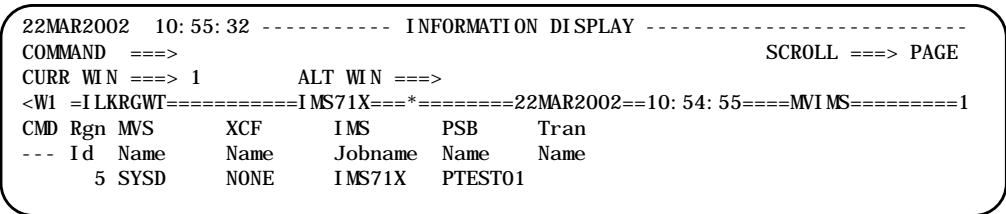


Figure 94. Region Lock Wait List View, Scrolled Right

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

The following hyperlinks are provided in the ILKRGWT view.

Hyperlink from	To see
Rgn Jobname	Region Activity Detail view (IRGNDTLR), where you can see what processing the thread has done up until now
Wait Time	Resource Lock List view (ILKRSLST), where you can see all waiters and holders of a given resource

# Resource Lock Summary View

The Resource Lock Summary view (ILKRSSUM), shown in Figure 95 and Figure 96, shows you which database resources are most contended for. Degree of contention for a given resource is measured by number of threads waiting (Number Waiters field), longest wait times (Oldest Waiter field), and average wait times (Avg Wait field).

With this view, you can see

- Every resource held by any participant in an N-way data sharing group
- Every resource waited for by any participant
- How many waiters there are
- How many holders there are

You can also see

- The longest wait time
- The average wait time
- The longest hold time

To display the Resource Lock Summary view, type the view name (ILKRSSUM) on any command line within the IPSM product.

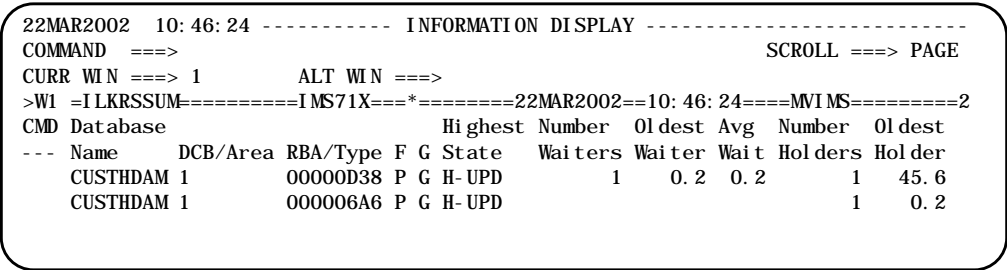


Figure 95. Resource Lock Summary View (ILKRSSUM)

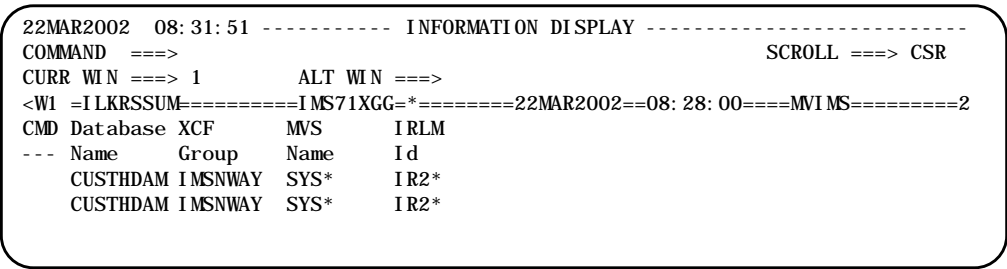


Figure 96. Resource Lock Summary View, Scrolled Right

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

The following hyperlinks are provided in the ILKRSSUM view.

Hyperlink from	To see
Number Waiter	Which threads are waiting for a resource
Number Holders	Which threads are holding a resource

# Resource Lock List View

The Resource Lock List view (ILKRSLST), shown in Figure 97 and Figure 98, shows all waiters for and holders of any database resource. With this view, you can see

- Every resource lock held by any participant in an N-way data sharing group
- Every resource lock waited for by any participant
- How long a thread has been waiting for a lock
- How long a thread has been holding a lock

If you display this view without specifying any parameters (by typing ILKRSLST on any command line within the IPSM product), you see a list of all resources contended for and their respective holders and waiters.

If you are interested in a specific resource, you can hyperlink on the Wait Time field to see waiters and holders for the given resource only. (Hyperlinking *to* this view also filters it to show waiters and holders for a selected resource only.)

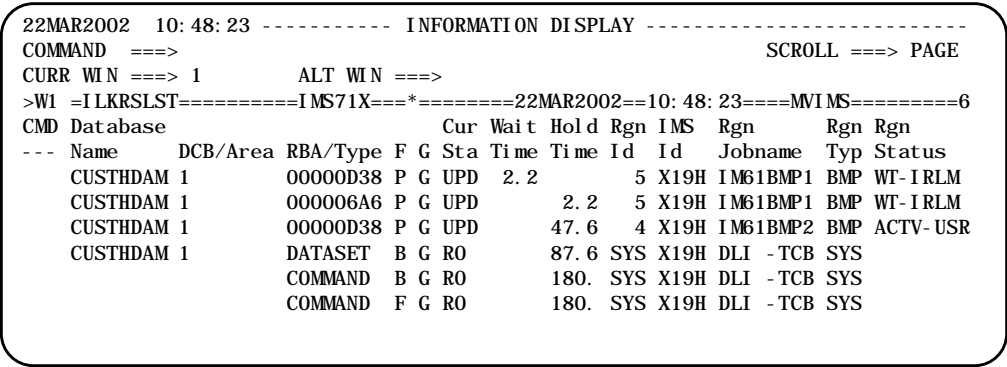


Figure 97. Resource Lock List View (ILKRSLST)

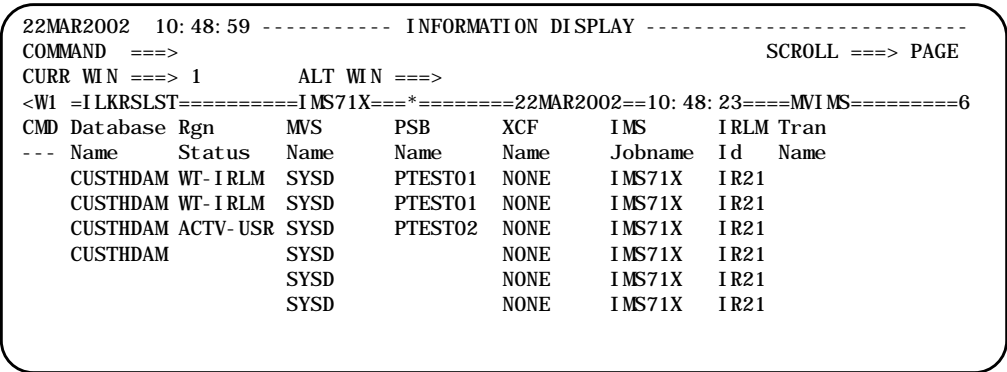


Figure 98. Resource Lock List View, Scrolled Right

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.



The following hyperlinks are provided in the ILKRSLST view.

Hyperlink from	To see
Rgn Jobname	Region Activity Detail view (IRGNDTLR), where you can see detailed information about the thread
Wait Time	Another version of the Resource Lock List view (ILKRSLST), where you can see all waiters and holders of a given resource
Hold Time	Region Lock List view (ILKRGLST), where you can see all the resources held or waited for by the thread. This information is especially helpful for analyzing lock problems where a region holding requested resources is itself waiting for another resource.

To display the unfiltered Resource Lock List view, enter the view name (ILKRSLST) on any command line within the IPSM product and press Enter. To display a filtered Resource Lock List view, hyperlink from the Wait Time field in the Region Wait List view (ILKRGWT).

# Resource Lock Wait List View

The Resource Lock Wait List view (ILKRSWT), shown in Figure 99 and Figure 100, provides a complete list of resources against which CICS threads are waiting to get locks. With this view, you can see

- Every resource lock waited for by any participant in an N-way data sharing group
- How long any thread has been waiting

If you display this view without specifying any parameters (by typing ILKRSWT on any command line within the IPSM product), you see all resources that have threads waiting for them.

If you wish to see waiters and holders for a specific resource only, hyperlink from the Wait Time field within this view. (Hyperlinking to this view from the Wait Time field of ILKRGWT view also shows waiters and holders for a selected resource only.)

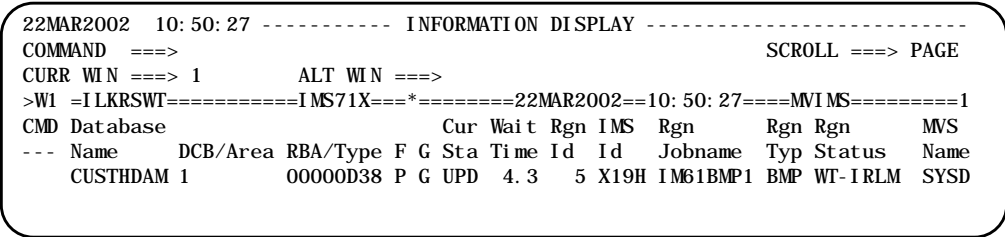


Figure 99. Resource Lock Wait List View (ILKRSWT)

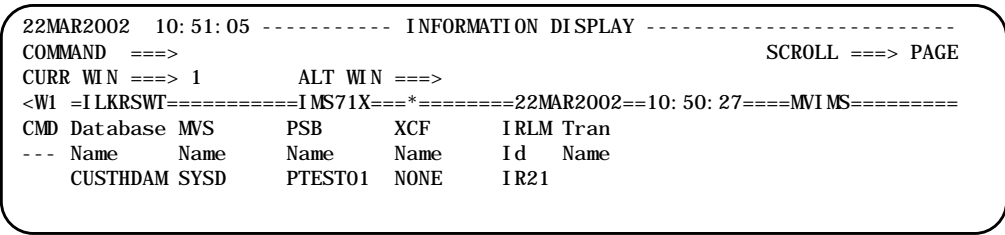


Figure 100. Resource Lock Wait List View, Scrolled Right

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

The following hyperlinks are provided in the ILKRSWT view.

Hyperlink from	To see
Rgn Jobname	Region Activity Detail view (IRGNDTLR), where you can see what processing the thread has done up until now
Wait Time	Resource Lock List view (ILKRSLST), where you can see all waiters and holders of a given resource.

---

## Part 4. Managing IMS Operations

This part describes how you can use the MAINVIEW for DBCTL IPSM views to manage IMS operations. For general information about views, see the *Using MAINVIEW* manual.

<b>Chapter 11. Managing Fast Path DEDB Areas</b>	<b>145</b>
Accessing the Fast Path DEDB Area Views	146
Fast Path DEDB Area Overview View	147
Fast Path DEDB Area Detail View	148
Fast Path DEDB Area Statistics View	149
Fast Path DEDB Area Status View	150
Fast Path DEDB Area Object Easy Menu	151
<b>Chapter 12. Managing Databases</b>	<b>153</b>
Accessing the Database Views	154
Database Overview View	155
Database Detail View	157
Database Type Summary View	158
Database Status Summary View	159
Database Object Easy Menu	160
<b>Chapter 13. Managing Application Programs</b>	<b>161</b>
Accessing the Program Views	162
Program Object Easy Menu	163
Program Overview View	164
Program Count by Type View	165
Program Count by Type and Status View	166
<b>Chapter 14. Cross-Referencing IMS Resources</b>	<b>167</b>
Accessing the Cross-Reference Views	168
Assessing the Impact of Actions against IMS Resources	169
Taking a Database Offline	169
Solving Failure to Take Database Offline	169
Solving Program Failure at Startup	169
Cross-Reference All Records View	170
Program Cross-Reference Summary View	171
Program-to-Database Cross-Reference View	172
Database Cross-Reference Summary View	174
Database-to-Program Cross-Reference View	175
<b>Chapter 15. Managing IMS Database Activity</b>	<b>177</b>
Accessing the IMS Database Activity Views	179
Analyzing a Data Sharing Group	179
Analyzing an Individual IMS	180
Database Activity Detail View – Data Sharing Group Level	181
Database Activity View – IMS System Level	183
Database Activity Detail View	185
Database Activity View – Logical (PCB) Level	188
Database I/O Activity View – Physical Database Level	190
Database I/O Activity View – Database/Volume Level	192
Database I/O Activity View – Volume Level	194
Database Activity Detail View – VSAM Buffer Pool Level	196
Database Activity Detail View – OSAM Buffer Pool Level	198

Database Activity View – VSAM Buffer Pool Level .....	200
Database Activity View – OSAM Buffer Pool Level .....	202
<b>Chapter 16. Analyzing Data Sets.....</b>	<b>205</b>
Accessing the Data Set Views .....	205
Hyperlinks in Data Set Views .....	206
Data Set Summary Views .....	208
Data Set Summary Realtime View (DSVSUMR) .....	208
Data Set Summary Interval View (DSVSUM).....	209
Data Set Detail Views .....	210
Data Set Detail Realtime View (DSVDTLR).....	210
Data Set Detail Interval View (DSVDTL) .....	211

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## Chapter 11. Managing Fast Path DEDB Areas

This chapter discusses the sysplex-enabled Fast Path Area views provided for users operating in the MAINVIEW for DBCTL IPSM environment.

You can use the IPSM Fast Path area views to manage and control your IMS DEDB (data entry database) areas. These interactive views allow you to issue commands and see their results immediately.

With IPSM Fast Path Area views, you can immediately access pertinent information about each of your DEDB areas. This helps you better understand the impact of changing the status of a particular area. It also helps you manage the programs and transactions that are sensitive to that DEDB area.

IPSM Fast Path Area views show you

- DEDB area structure and status
- Amount of space available
- EQE information
- Extensive CI statistics, broken down by category

After identifying the information you need, you can use line commands within the same view to control the Fast Path areas. (This capability requires a license for MAINVIEW AutoOPERATOR for IMS.)

The following IPSM Fast Path area views are provided:

View name	Description
<b>IFPSUMR</b>	Fast Path DEDB Area Overview
<b>IFPDTLR</b>	Fast Path DEDB Area Detail
<b>IFPORGR</b>	Fast Path DEDB Area Statistics
<b>IFPSTAR</b>	Fast Path DEDB Area Status
<b>IFPMR</b>	Fast Path Area Object Easy Menu

---

## Accessing the Fast Path DEDB Area Views

You can display any of the Fast Path area views described in this chapter by typing the view name on the command line, or by typing `VIEWS` and then selecting the view from a list of views.

You can also hyperlink to the Fast Path area views from the DBCTL Easy Menu (EZIMS) or Fast Menu (EZIFAST).

# Fast Path DEDB Area Overview View

The Fast Path DEDB Area Overview view (IFPSUMR), shown in Figure 101 and Figure 102, enables you to manage and control your IMS DEDB (data entry database) areas.

The Fast Path DEDB Area Overview view shows area name, DBD name, IMS ID and jobname, area access and organization type, authorization state, access level, local and global DMB numbers, current status of the area, and whether the area is defined as nonrecoverable. The view also shows

- Number of EQEs (error queue elements) used
- Whether EQEs are read or write errors
- Size of VSAM control intervals
- Number of control intervals
- Number of control intervals available

Control interval (CI) statistics are broken down into root CIs, index CIs, sequential dependent CIs, root CIs per unit of work, and overflow CIs per unit of work.

You can control your Fast Path DEDB areas by using line commands within this view. (This requires a license for MAINVIEW AutoOPERATOR for IMS.) To display the Fast Path DEDB Area Overview view, you can type the view name (IFPSUMR) on any command line within IPSM.

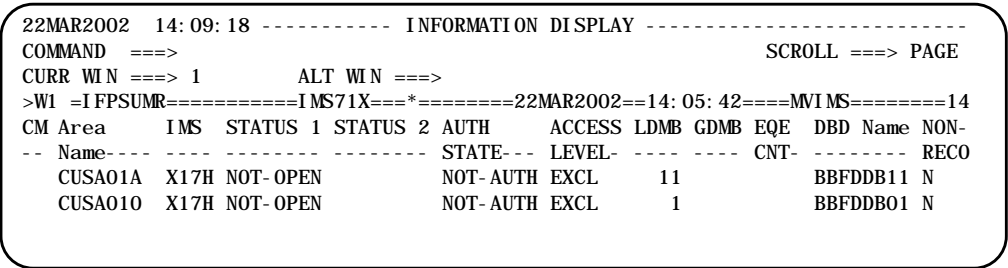


Figure 101. Fast Path DEDB Area Overview View (IFPSUMR)

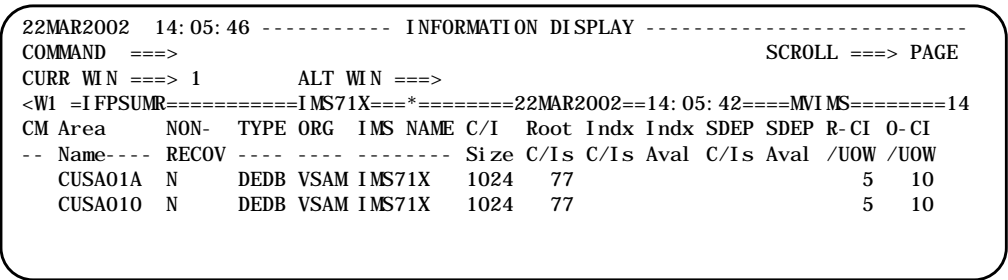


Figure 102. Fast Path DEDB Area Overview View, Scrolled Right

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

# Fast Path DEDB Area Detail View

The Fast Path DEDB Area Detail view (IFPDTLR), shown in Figure 103, allows you to focus and analyze a selected IMS DEDB (data entry database) area.

The Fast Path DEDB Area Detail view provides detailed statistics for a selected Fast Path DEDB area. The view shows area name, DBD name, IMS ID and jobname, area access and organization type, authorization state, access level, local and global DMB numbers, current status of the area, and whether the area is defined as nonrecoverable. The view also shows

- Number of EQEs (error queue elements) used
- Whether EQEs are read or write errors
- Size of VSAM control intervals
- Number of control intervals
- Number of control intervals available

Control interval (CI) statistics are broken down into root CIs, index CIs, sequential dependent CIs, root CIs per unit of work, and overflow CIs per unit of work.

To display the Fast Path DEDB Area Detail view, you can type the view name (IFPDTLR) on any command line within IPSM. You can also hyperlink to this view from the Area Object Easy Menu (IFPMR) or the Database Object Easy Menu (IDBMR).

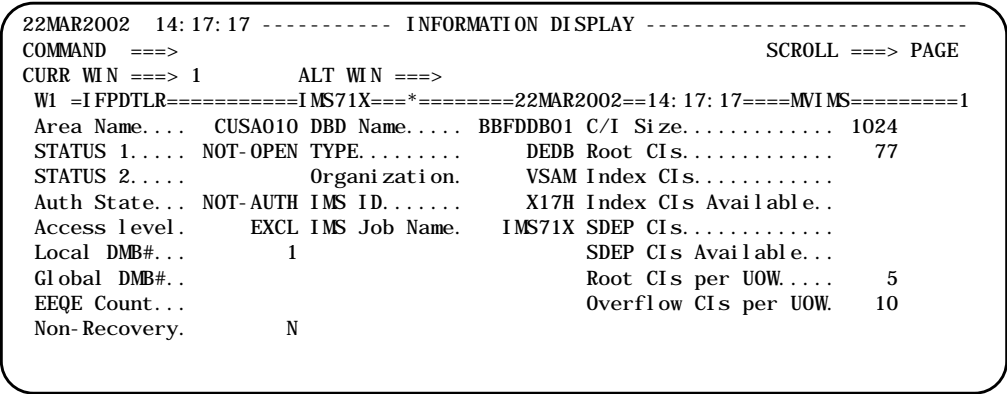


Figure 103. Fast Path DEDB Area Detail View (IFPDTLR)

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.



# Fast Path DEDB Area Statistics View

The Fast Path DEDB Area Statistics view (IFPORGR), shown in Figure 104 and Figure 105, helps you to examine area structure and space availability.

The Fast Path DEDB Area Statistics view provides detailed information about the DEDB area structure and the amount of space available. It lists areas by name and identifies DBD name, IMS ID and jobname, and area status, type, and organization. It shows

- Size of VSAM control intervals (CIs)
- Number of VSAM root segment CIs
- Number of VSAM root segment CIs per unit of work
- Number of VSAM overflow CIs per unit of work
- Number of VSAM index CIs available
- Number of sequential dependent space CIs defined
- Number of sequential dependent space CIs available

You can control your Fast Path DEDB areas by using line commands within this view. (This requires a license for MAINVIEW AutoOPERATOR for IMS.) To display the Fast Path DEDB Area Statistics view, you can type the view name (IFPORGR) on any command line within IPSM. You can also hyperlink to this view from the Area Object Easy Menu (IFPMR).

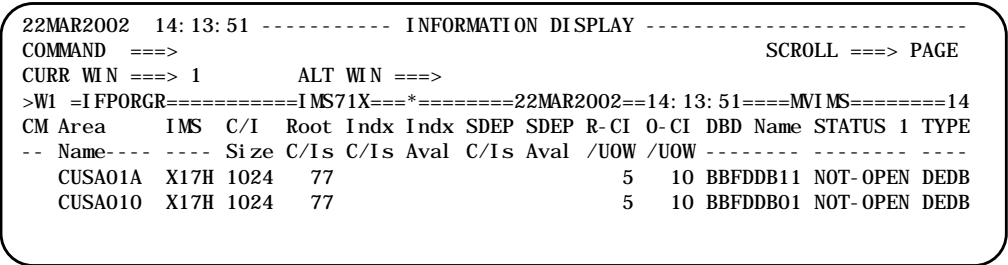


Figure 104. Fast Path DEDB Area Statistics View (IFPORGR)

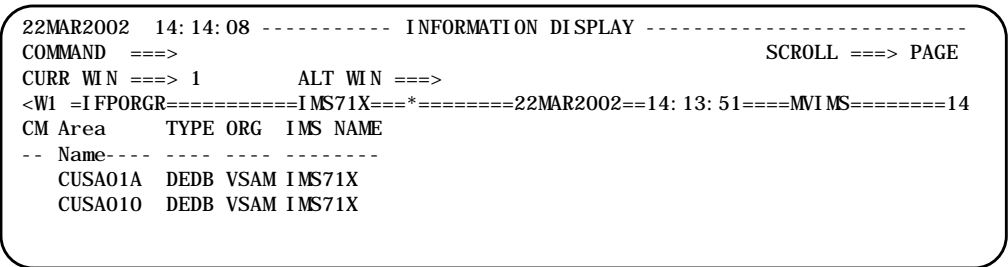


Figure 105. Fast Path DEDB Area Statistics View, Scrolled Right

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

# Fast Path DEDB Area Status View

The Fast Path DEDB Area Status view (IFPSTAR), shown in Figure 106, allows you to examine or modify the status of Fast Path DEDB areas.

The Fast Path DEDB Area Status view summarizes status information for all DEDB areas in the IMS. Level 1 status indicates whether an area is open, not open, stopped, or locked. Level 2 status indicates error or failure conditions for the area.

This view lists all DEDB areas by Level 1 status. It provides a count of all areas having the same status. Additionally, it indicates area type, organization, access level, and authorization state, as well as IMS ID and jobname.

You can control your Fast Path DEDB areas by using line commands within this view. (This requires a license for MAINVIEW AutoOPERATOR for IMS.)

To display the Fast Path DEDB Area Status view, you can type the view name (IFPSTAR) on any command line within IPSM. You can also hyperlink to this view from the Area Object Easy Menu (IFPMR).

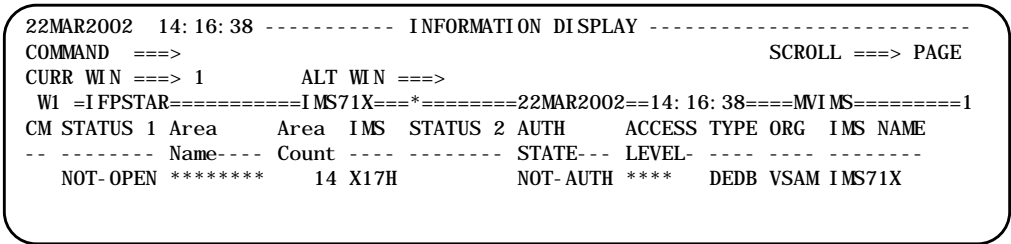


Figure 106. Fast Path DEDB Area Status View (IFPSTAR)

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

The following hyperlink is provided in the IFPSTAR view.

Hyperlink from	To see
Status 1	Fast Path DEDB Area Overview view (IFPSUMR). IFPSUMR view, filtered to show all areas having the same status that you selected

# Fast Path DEDB Area Object Easy Menu

The Fast Path DEDB Area Object Easy Menu (IFPMR), shown in Figure 107, gives you quick access to Fast Path DEDB Area information.

You can use this menu to

- Hyperlink to Fast Path Area Detail, Status, or Statistics views
- Hyperlink to the IMS Easy Menu (EZIMS) or IMS Fast Menu (EZIFAST)
- Filter Fast Path Area information on
  - EQE count
  - read or write error
  - locked or stopped status

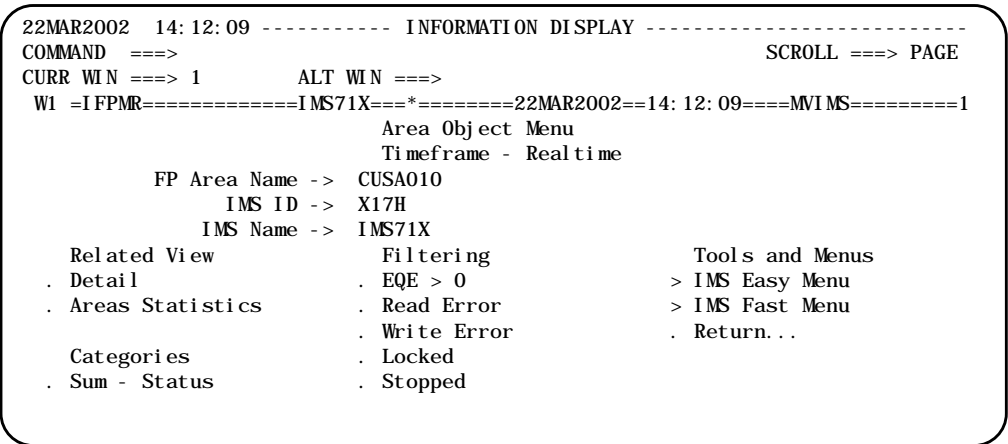


Figure 107. Fast Path DEDB Area Object Easy Menu (IFPMR)

To use the Fast Path DEDB Area Object Easy Menu, position the cursor on any option that interests you, and then press Enter.

To display the Fast Path DEDB Area Object Easy Menu, you can type IFPMR on any command line within IPSM. You can also hyperlink to this menu from the first information column of IFPSUMR or IFPORGR view.



---

## Chapter 12. Managing Databases

This chapter discusses the sysplex-enabled database views provided for users operating in the IPSM environment.

IPSM's database views help you manage and control IMS databases. These interactive views allow you to issue commands and see their results immediately.

With the views, you can

- See detailed database information
- Summarize information by database access type or status
- Filter on EEQE (extended error queue element) count, read or write error, locked or stopped status
- Hyperlink to associated area and program information

Statistics include access and organization type, authorization state, access level, local and global DMB numbers, current status, and whether the database is defined as nonrecoverable.

With the IPSM database views, you can immediately access pertinent information about each of your IMS databases, which can help you better manage the databases and the programs and transactions that are sensitive to them.

The following database views and Easy Menu are provided:

View name	Description
<b>IDBSUMR</b>	Database Overview
<b>IDBDTLR</b>	Database Detail
<b>IDBTYPR</b>	Database Type Summary
<b>IDBSTAR</b>	Database Status Summary
<b>IDBMR</b>	Database Object Easy Menu

---

## Accessing the Database Views

You can display any of the database views described in this chapter by entering the view name on the command line, or by entering **VIEWS** and then selecting the view from a list.

You can also hyperlink to the database views from the Resources section of the DBCTL Easy Menu (EZIMS).

## Database Overview View

This section describes the Database Overview view (IDBSUMR), which is shown in Figure 108 and Figure 109. You can use this view to manage and control your IMS databases.

This tabular view displays a scrollable list of all databases in the IMS systems and provides database-level statistics for each of the databases.

The view shows the DBD name or the High Availability Large Database (HALDB) partition name, IMS ID and jobname, access and organization type, authorization state, access level, local and global DMB numbers, current status, and whether the database is defined as nonrecoverable.

After accessing the information you need, you can control the databases by using line commands within the view. (This requires a license for MAINVIEW AutoOPERATOR for IMS.)

To display the Database Overview view, you can enter IDBSUMR on any command line within IPSM.

```
22MAR2002 13: 48: 26 ----- INFORMATION DISPLAY -----
COMMAND ==>>
CURR WIN ==>> 1          ALT WIN ==>>
>W1 =IDBSUMR=====IMS71H====*=====22MAR2002==11: 54: 32====MVI MS=====94
CM DBD/PART IMS Database Auth Access Loca Glob EEQE
-- Name ID Type Org Status 1 Status 2 State Level DMB# DMB# Cnt
DBFSAMD2 H71H MSDB OPENED NOT- AUTH EXCL 24
DBFSAMD3 H71H DEDB VSAM NOT- OPEN N/A UPDT 25
DBFSAMD4 H71H NOT- OPEN NOT- AUTH UPDT 26
DB1 H71H NOT- OPEN NOT- AUTH UPDT 27
DB1H H71H PHI DAM OSAM OPENED N/A UPDT 28 15
DB1H1 H71H PART OSAM NOT- OPEN UPDT- EXC UPDT 93 15
DB1H2 H71H PART OSAM NOT- OPEN NOT- AUTH UPDT 94 15
DB1I H71H NOT- OPEN NOT- AUTH UPDT 29
DI 21PART H71H NOT- OPEN NOT- AUTH UPDT 30
DSKDBDI 1 H71H STOPPED NOT- I N I T NOT- AUTH UPDT 31
DSKDBD01 H71H STOPPED NOT- I N I T NOT- AUTH UPDT 32
DSKDBD02 H71H STOPPED NOT- I N I T NOT- AUTH UPDT 33
DSKDBDV1 H71H STOPPED NOT- I N I T NOT- AUTH UPDT 34
DSKDBDV2 H71H STOPPED NOT- I N I T NOT- AUTH UPDT 35
GBGDBDI 1 H71H STOPPED NOT- I N I T NOT- AUTH UPDT 36
GBGDBD01 H71H STOPPED NOT- I N I T NOT- AUTH UPDT 37
```

Figure 108. Database Overview View (IDBSUMR)

```

22MAR2002 13:52:51 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
<W1 =IDBSUMR=====IMS71H====*=====22MAR2002==11:54:32====MVIMS=====94
CM DBD/PART EEQE Non- IMS
-- Name      Cnt  Recov Name
  DBFSAMD2      N    IMS71H
  DBFSAMD3      N    IMS71H
  DBFSAMD4      N    IMS71H
  DB1           N    IMS71H
  DB1H          N    IMS71H
  DB1H1         N    IMS71H
  DB1H2         N    IMS71H
  DB1I          N    IMS71H
  DI21PART      N    IMS71H
  DSKDBDI1      N    IMS71H
  DSKDBD01      N    IMS71H
  DSKDBD02      N    IMS71H
  DSKDBDV1      N    IMS71H
  DSKDBDV2      N    IMS71H
  GBGDBDI1      N    IMS71H
  GBGDBD01      N    IMS71H

```

Figure 109. Database Overview View, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.



# Database Detail View

The Database Detail view (IDBDTLR), shown in Figure 110, provides detailed statistics about a selected IMS database.

This view identifies database name, access and organization type, authorization state, access level, current status, local and global DMB numbers, and whether the database is defined as nonrecoverable. It also displays IMS ID and jobname, and the EEQE count against the database.

To display the Database Detail view, you can enter IDBDTLR on any command line within IPSM. You can also hyperlink to this view from the Database Object Easy Menu (IDBMR).

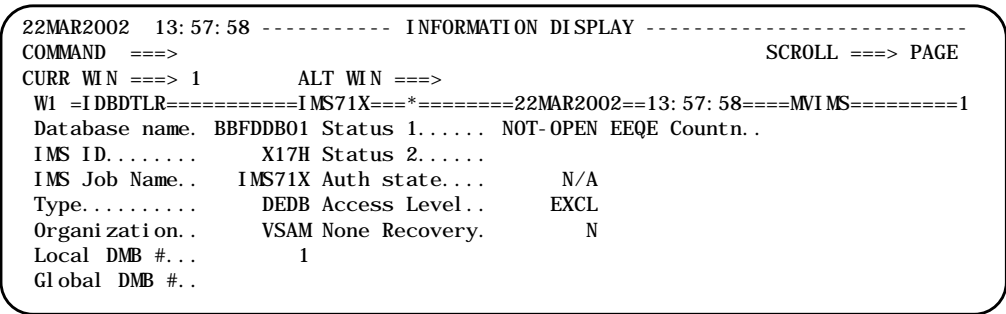


Figure 110. Database Detail View (IDBDTLR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

# Database Type Summary View

This section describes the Database Type Summary view (IDBTYPR), which is shown in Figure 111. You can access this view when you want to examine database access type information in a tabular view. You can also control your IMS databases by using line commands within this view. (This requires a license for MAINVIEW AutoOPERATOR for IMS.)

This view summarizes databases by type of DBD access method and by IMS ID. It provides a count of the DBDs in each access method category. (When there is no value in the Type field, the associated database has been generated but does not have a member in ACBLIB, and it has a Status 2 of NOT-INIT.)

The view provides two levels of information about current status. The value in the Status 1 field indicates whether a database is open, not open, stopped, or locked. The value in the Status 2 field indicates error or failure conditions for the database. The view also shows DBD name, authorization state, access level, organization type, and associated IMS.

To display the Database Type Summary view, you can enter IDBTYPR on the command line.

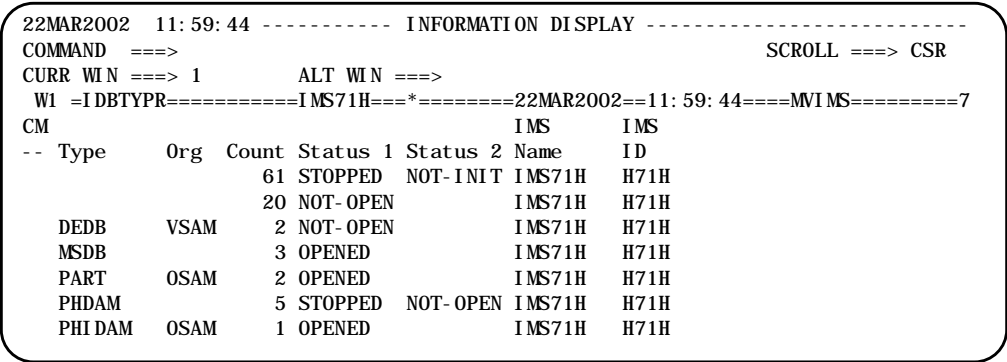


Figure 111. Database Type Summary View (IDBTYPR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in IDBTYPR view.

Hyperlink from	To see
Count	IDBSUMR view, which shows all the databases that have the type of access method you selected

# Database Status Summary View

This section describes the Database Status Summary view (IDBSTAR), which is shown in Figure 112. You can access this view when you need to examine database status information in a tabular view. You can also control your IMS databases by using line commands within this view. (This requires a license for MAINVIEW AutoOPERATOR for IMS.)

The Database Status Summary view summarizes all databases in the IMS systems by status and by IMS ID. It also provides a count of the databases in each status category. Summarization is by Status 1. (Status 1 indicates whether a database is open, not open, stopped, or locked. Status 2 indicates error or failure conditions for the database.)

Additional database information is provided: DBD name, access method, organization type, authorization state, associated IMS ID and jobname, EEQE count, and whether the database is defined as nonrecoverable.

To display the Database Status Summary view, you can enter IDBSTAR on the command line.

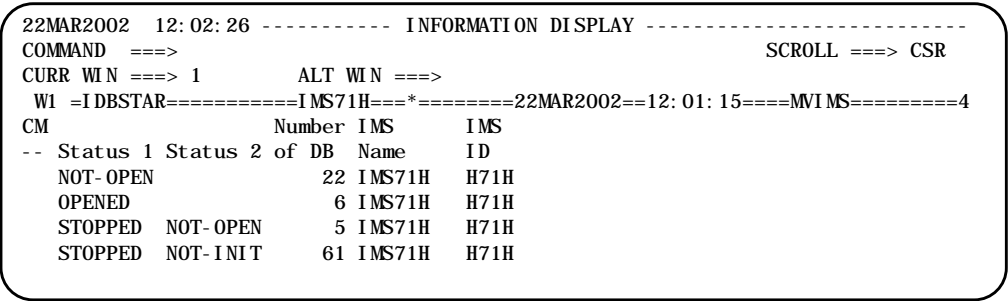


Figure 112. Database Status Summary View (IDBSTAR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in IDBSTAR view.

Hyperlink from	To see
Number of DB	IDBSUMR view, which shows all the databases with the status you selected

---

## Database Object Easy Menu

This section describes the Database Object Easy Menu (IDBMR). This menu gives you quick access to information about a specific database in your IMS.

You can use this menu to

- Hyperlink to Database Detail, Status, or Type Summary views
- Hyperlink to related area, program, or transaction information
- Hyperlink to the IMS Easy Menu (EZIMS) or IMS Fast Menu (EZIFAST)
- Filter database information on
  - EEQE count (extended error queue element)
  - read or write error
  - locked or stopped status

The Database Object Easy Menu is shown in Figure 113.

```
22MAR2002 13:55:04 ----- INFORMATION DISPLAY -----
COMMAND ===>
CURR WIN ===> 1      ALT WIN ===>
W1 =IDBMR=====IMS71X====*=====22MAR2002==13:54:59====MVI MS=====1
                                Database Object Menu
                                Timeframe - Realtime
      Database Name -> BBFDDDB01
      IMS ID -> X17H
      IMS Name -> IMS71X
Related Resources      Filtering      Tools and Menus
. Detail              . EEQE > 0      > IMS Easy Menu
. Associated areas    . Read Error    > IMS Fast Menu
. Associated Program  . Write Error  . Return...
. Associated Trans    . Locked
                    . Stopped
Categories
. Type
. Status
```

Figure 113. Database Object Easy Menu (IDBMR)

To use the Database Object Easy Menu, position the cursor on any option that interests you and press Enter.

To display the Database Object Easy Menu, you can enter IDBMR on any command line within IPSM. Or you can hyperlink to this menu from the first information column of IDBSUMR or IDBTYPYR view.

---

## Chapter 13. Managing Application Programs

This chapter discusses the sysplex-enabled program views provided for users operating in the IPSM environment.

You can use the IPSM program views to see

- How application programs are running in your IMS sysplex environment
- What the impact will be if you change the status of a particular program

With the IPSM program views, you can find out the transactions and databases associated with any program—and you can see their status. This helps you understand what the impact will be if you change the status of a particular program.

The program views show you

- All programs (with counts) of any given type or status
- Transactions affected if you change a program's status
- Regions currently running a program

After identifying the information you need, you can use line commands within the same view to control the programs defined for your IMS. (This requires a license for MAINVIEW AutoOPERATOR for IMS.)

The following program views and Easy Menu are provided:

<b>View name</b>	<b>Description</b>
<b>IPGMR</b>	Program Easy Menu
<b>IPGSUMR</b>	Program Overview
<b>IPGTYPR</b>	Program Count by Type
<b>IPGSTAR</b>	Program Count by Type and Status

---

## Accessing the Program Views

You can display any of the program views described in this chapter by typing the view name on the command line, or by typing VIEWS, and then selecting the view from the list presented.

You can also hyperlink to the program views from the Resources section of the DBCTL Easy Menu (EZIMS).

---

## Program Object Easy Menu

The Program Object Easy Menu (IPGMR), shown in Figure 114, provides a good starting point for examining how application programs are running in the IMS sysplex environment.

By hyperlinking from this IPSM menu, you can go straight to the statistics you need to better manage the programs running in your IMS sysplex environment. The Program Object Easy Menu allows you to select options that take you to views showing

- Program information filtered by type or by started/not started status
- Program summarization by type or by type and status
- Transactions affected if you change a program's status
- Regions currently running a specific program

You can also hyperlink to the IMS Easy and Fast Menus (EZIMS and EZIFAST).

```
22MAR2002 13:43:12 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
WI =IPGMR=====IMS71X====*=====22MAR2002==13:43:06====MVIS=====1
                                Program Object Menu
                                Timeframe - Realtime
                                Program Name -> APPC02
                                IMS ID -> X17H
                                MVS Name -> SYSC
                                Related Resources
                                . Transactions by...
                                . Regions running...
                                . Associated databases
                                . Associated Trans
                                . Selection/Filtering
                                . TP Only
                                . BMP Only
                                . FP N Only
                                . FP U Only
                                . Started Programs
                                . Not started Programs
                                +-----+
                                | Place cursor on |
                                | menu item and   |
                                | press ENTER     |
                                +-----+
                                Summarization
                                . By Type and Status
                                . By Type
                                System Wide Analysis
                                . Program/Tran
                                . Region/Program
                                Tools and Menus
                                > IMS Easy Menu
                                > IMS Fast Menu
                                . Return...
```

Figure 114. Program Object Easy Menu

To use the Program Object Easy Menu, position the cursor on any option that interests you and press Enter.

To display the Program Object Easy Menu, type IPGMR on the command line, or type VIEWS, and then select IPGMR from the list presented. You can also hyperlink to this menu from the first information column in IPGSUMR view.

---

# Program Overview View

The Program Overview view (IPGSUMR), shown in Figure 115, lists all IMS application programs by name. It identifies their type, status, and scheduling type. It also provides the related IMS ID and OS/390 name.

You can control the programs defined for your IMS by using line commands within this view. (This requires a license for MAINVIEW AutoOPERATOR for IMS.)

To display this high-level view, you can type the view name (IPGSUMR) on any command line within IPSM. You can also hyperlink to this view from the Resources section of the IMS Easy Menu (EZIMS).

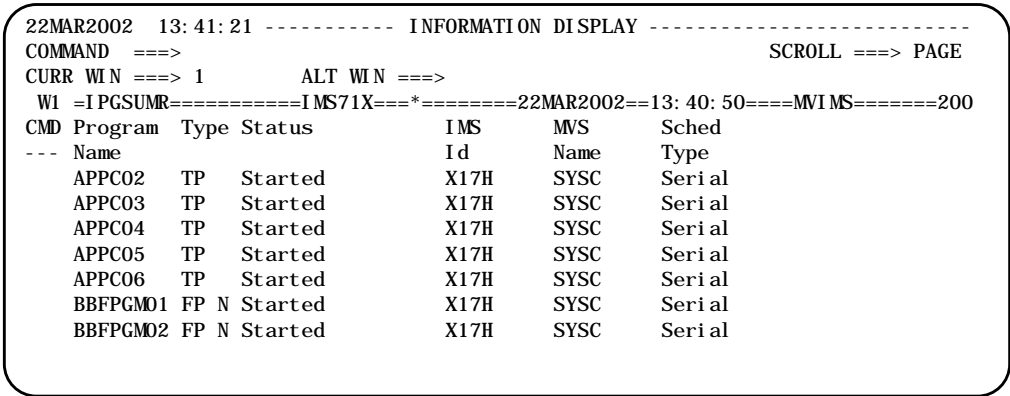


Figure 115. Program Overview View (IPGSUMR)

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.



# Program Count by Type View

The Program Count by Type view (IPGTYPR), shown in Figure 116, provides a quick way to see all programs of a specific type.

This view summarizes all IMS application programs by type. The view also identifies the count of all programs in each type. Additional information includes the associated IMS name, IMS ID, and OS/390 name.

IPGTYPR, along with the other program views, allows you to use line commands to control the programs defined for your IMS. (This requires a license for MAINVIEW AutoOPERATOR for IMS.)

To display this summarized view, type the view name (IPGTYPR) on any command line within IPSM.

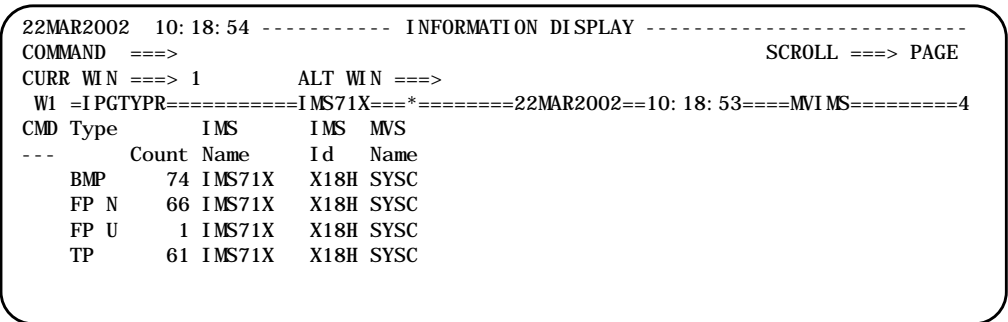


Figure 116. Program Count by Type View (IPGTYPR)

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

The following hyperlink is provided in IPGTYPR view.

Hyperlink from	To see
Count	IPGSUMR view, filtered on all programs of the same type. The view shows information, including status and scheduling type, for all application programs of a given type.

## Program Count by Type and Status View

The Program Count by Type and Status view (IPGSTAR), shown in Figure 117, provides a quick way to see all programs of a specific type and status.

This view summarizes all IMS application programs by type and status. The view also shows the count of all programs having both the same type and status. Additional information includes the associated IMS name, OS/390 name, and IMS ID.

You can control the programs defined for your IMS by using line commands within this view. (This requires a license for MAINVIEW AutoOPERATOR for IMS.)

To display the Program Count by Type and Status view, type the view name (IPGSTAR) on any command line within IPSM.

```
22MAR2002 12:34:12 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1      ALT WIN ==>
W1 =IPGSTAR=====IMS71X====*=====22MAR2002==12:34:11====MVIMS=====7
CMD
--- Status          Type Count Name      Name      Id
   Not initialized BMP    32 IMS71X  SYSC      X18H
   Not initialized TP     25 IMS71X  SYSC      X18H
   Not initialized FP N    8  IMS71X  SYSC      X18H
   Started          FP U    1  IMS71X  SYSC      X18H
   Started          FP N   58  IMS71X  SYSC      X18H
   Started          BMP    42 IMS71X  SYSC      X18H
   Started          TP     36 IMS71X  SYSC      X18H
```

Figure 117. Program Count by Type and Status View (IPGSTAR)

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

The following hyperlink is provided in IPGSTAR view.

Hyperlink from	To see
Type	IPGSUMR view, filtered on all programs of the same type and status

---

## Chapter 14. Cross-Referencing IMS Resources

This chapter discusses the sysplex-enabled cross-reference views provided for users operating in the MAINVIEW for DBCTL IPSM environment.

System programmers, DBAs, and application programmers can pick their point of entry into these views. Using their preferred point of entry (database or program), they can conveniently cross-reference resources to

- Investigate issues like data unavailability
- Assess beforehand the impact of actions against IMS resources

The IPSM cross-reference views allow you to discover the association between programs and databases. For example, if a database is unavailable, you can easily discover the cause—the problem may be with the database or a program that uses the database.

With cross-reference views, you can manage programs as they relate to a database, and you can conveniently hyperlink to manage the database itself. Before stopping a program or taking a database offline, you can use these views to see

- All programs affected by a specific database
- All databases used by a program

The following IPSM cross-reference views are provided:

View name	Description
<b>IXRSUMR</b>	Cross-Reference All Records
<b>IXPSUMR</b>	Program Cross-Reference Summary
<b>IXPDSUMR</b>	Program-to-Database Cross-Reference
<b>IXDSUMR</b>	Database Cross-Reference Summary
<b>IXDPSUMR</b>	Database-to-Program Cross-Reference

# Accessing the Cross-Reference Views

You can display any of the cross-reference views described in this chapter by typing the view name on the command line, or by typing VIEWS, and then selecting the view from the list presented.

The cross-reference views allow you to pick your preferred point of entry for cross-reference information. If you prefer to view information from a database standpoint, choose a view whose third letter in the name begins with *D* (for database). If you prefer seeing information from a program standpoint, choose a view where the third letter in the name is *P* (for program).

The easiest way to access the cross-reference views is by hyperlinking from one of the DBCTL Easy or Fast Menus to the IMS Cross-Reference Menu (EZIMSX), shown in Figure 118. From the IMS Cross-Reference Menu, simply select the option showing the mode of cross-referencing you want to use.

```
22MAR2002 12:01:09 ----- INFORMATION DISPLAY (MAX)-----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
WI =EZIMSX===== (ALL=====IMS71D=) 22MAR2002==12:01:09====MVIMS=====1

                                IMS Cross Reference Menu
                                IMS71D
                                IMS ID --->
Transaction to
* Database and Program
* Database with Status
* Program with Status

Transaction Selection
* Database and Program
* Database with Status
* Program with Status

                                +-----+
                                | Place cursor on |
                                | menu item and   |
                                | press ENTER      |
                                +-----+

                                Database to
                                . Tran and Program
                                * Tran with Status
                                . Program with Status

                                Database Selection
                                > Tran and Program
                                * Tran with Status
                                > Program with Status

                                Program to
                                . Database and Tran
                                . Database with Status
                                * Tran with Status

                                Program Selection
                                > Database and Tran
                                > Database with Status
                                * Tran with Status

                                Tools and Menus
                                > Utilities
                                > IMS Easy Menu
                                > MVIMS Main Menu
                                > IMS SSI Menu
                                . Return...
```

Figure 118. IMS Cross-Reference Menu (EZIMSX)

---

## Assessing the Impact of Actions against IMS Resources

The IPSM cross-reference views are an exceptional tool for managing IMS resources. You can assess beforehand the impact of actions you might take against programs or databases.

### Taking a Database Offline

If you have a database in error, you can assess the impact of taking it offline before you take any action. You can identify the programs that use the database. Then you can issue line commands to modify their state (if appropriate) before you take action against the database in error.

For example, you can begin at IXDPDSUMR view. It shows you information about all programs using the database. You can then hyperlink from the Program Name field to IPGDSUMR view, where you can modify the state of associated programs. After returning to IXDPDSUMR view, you can hyperlink from the Database field to IDBDSUMR view, where you can go ahead and take the database offline.

**Note:** Issuing line commands requires a license for MAINVIEW AutoOPERATOR for IMS.

### Solving Failure to Take Database Offline

When you set out to take a database offline, the most common reason for failure is that you have a BMP currently running against that database (DFS565I message). That causes the DBR command to fail. With the IPSM cross-reference facility, you can identify any BMP programs that are sensitive to that database and you can take actions against them.

You can start at IXDPDSUMR view. Given the database, you can see all programs that are sensitive to that database. You can also see the program type. If you select a program in the Program field, you can hyperlink to IPGDSUMR view, where you can change the state of the BMP program. After returning to IXDPDSUMR view, you can hyperlink from the Database field to IDBDSUMR view, where you can go ahead and issue a line command to take the database offline.

**Note:** Issuing line commands requires a license for MAINVIEW AutoOPERATOR for IMS.

### Solving Program Failure at Startup

When a program fails at startup due to unavailable resources (abend U3303, for example), you have an easy way to identify the unavailable resource and take action against it.

You can begin at IXPDSUMR view. It shows you whether all needed databases are available and if not, the reason why. You can then hyperlink from the Database field to IDBDSUMR view, where you can issue line commands to modify the state of the database in question. After returning to IXPDSUMR, you can hyperlink from the Program Name field to IPGDSUMR view, where you can go ahead and start the program.

**Note:** Issuing line commands requires a license for MAINVIEW AutoOPERATOR for IMS.

# Cross-Reference All Records View

The Cross-Reference All Records view (IXRSUMR), shown in Figure 119, shows you a complete cross-reference of all programs and databases in the IMS.

The Cross-Reference All Records view is unsummarized. It contains a line entry for each database/program association. Each line entry is a separate record. The records are unsorted.

To display the Cross-Reference All Records view, type IXRSUMR on any command line within IPSM.

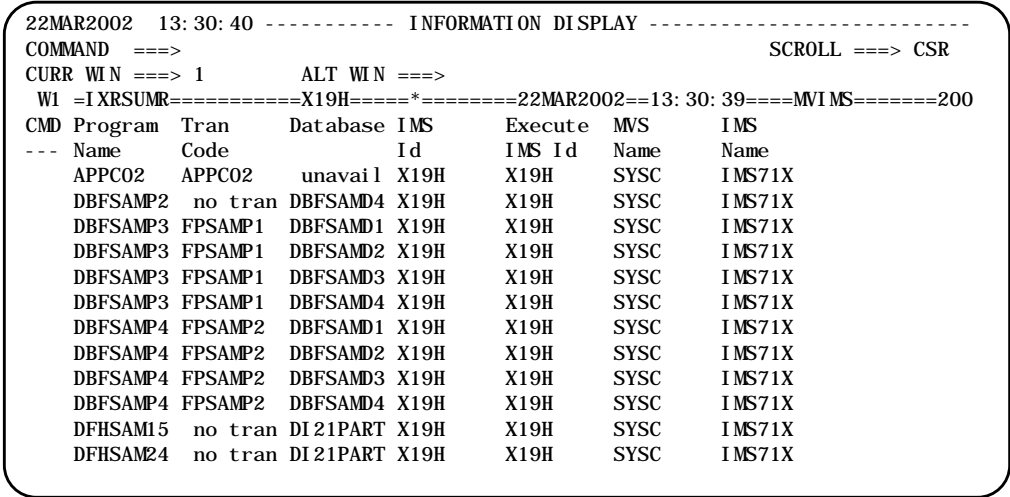


Figure 119. Cross-Reference All Records View (IXRSUMR)

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

Because all records are displayed, this view contains no summarization or hyperlinks.

## Program Cross-Reference Summary View

The Program Cross-Reference Summary view (IXPSUMR), shown in Figure 120, allows you to cross-reference programs and their associated databases.

The Program Cross-Reference Summary view lists all databases associated with all programs. With this view, you can

- Assess the impact of any actions you might take against a program
- Hyperlink to a view where you can perform actions against the program

To display the Program Cross-Reference Summary view, type IXPSUMR on any command line within IPSM.

```
22MAR2002 14: 25: 09 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
W1 =IXPSUMR=====IMS71X==*=====22MAR2002==14: 25: 09====MVI MS=====200
CMD Program Tran Database IMS Execute MVS IMS
--- Name Code Id IMS Id Name Name
APPC02 APPC02 unavail X17H X17H SYSC IMS71X
APPC03 APPC03 unavail X17H X17H SYSC IMS71X
APPC04 APPC04 unavail X17H X17H SYSC IMS71X
APPC05 APPC05 unavail X17H X17H SYSC IMS71X
APPC06 APPC06 unavail X17H X17H SYSC IMS71X
BBFPGM01 BBFTRN01 unavail X17H X17H SYSC IMS71X
BBFPGM02 no tran unavail X17H X17H SYSC IMS71X
BBFPGM03 BBFTRN03 unavail X17H X17H SYSC IMS71X
BBFPGM04 no tran unavail X17H X17H SYSC IMS71X
BBFPGM05 BBFTRN05 unavail X17H X17H SYSC IMS71X
BBFPGM06 no tran unavail X17H X17H SYSC IMS71X
BBFPGM07 BBFTRN07 unavail X17H X17H SYSC IMS71X
BBFPGM08 no tran unavail X17H X17H SYSC IMS71X
BBFPGM09 BBFTRN09 unavail X17H X17H SYSC IMS71X
BBFPGM10 no tran unavail X17H X17H SYSC IMS71X
BBFPGM11 BBFTRN11 unavail X17H X17H SYSC IMS71X
```

Figure 120. Program Cross-Reference Summary View (IXPSUMR)

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

## Program-to-Database Cross-Reference View

The Program-to-Database Cross-Reference view (IXPDSUMR), shown in Figure 121 and Figure 122, provides useful program-to-database cross-reference information.

This view lists all programs, the databases they are sensitive to, and the status of those databases. You can use this summary view to

- See whether needed database and program resources are available before starting a program
- Hyperlink to issue line commands against a database
- Hyperlink to issue line commands against a program

(Issuing line commands requires a license for MAINVIEW AutoOPERATOR for IMS.)

If you want to check on resource availability for a particular program, simply hyperlink on the Database field. A filtered view of IDBSUMR appears, showing the status of all databases the program is sensitive to.

This view lists all programs, with their status, OS/390 name, and IMS ID. It also lists every database that each program needs to run. It provides the following information about each database: Level 1 and Level 2 status, authorization state, access method, organization type, access limit, EEQE count, local and global DMB numbers, and whether the database has been defined as nonrecoverable.

To display the Program-to-Database Cross-Reference view, type IXPDSUMR on any command line within IPSM.

```
22MAR2002 14: 30: 31 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1      ALT WIN ==>
>W1 =IXPDSUMR=====X19H=====*=====22MAR2002==14: 30: 31====MVIMS=====115
CMD Program  IMS  Program      Database TYPE ORG  STATUS 1 STATUS 2 AUTH
--- Name     Id   Status      DBFSAMD DEDB VSAM NOT- OPEN          State---
DBFSAMP1 X19H Started      DBFSAMD3 DEDB VSAM NOT- OPEN          N/A
DBFSAMP2 X19H Started      DBFSAMD4          NOT- OPEN          NOT- AUTH
DBFSAMP3 X19H Started      DBFSAMD4          NOT- OPEN          NOT- AUTH
DBFSAMP3 X19H Started      DBFSAMD2 MSDB     OPENED          NOT- AUTH
DBFSAMP3 X19H Started      DBFSAMD1 MSDB     OPENED          NOT- AUTH
DBFSAMP3 X19H Started      DBFSAMD3 DEDB VSAM NOT- OPEN          N/A
DBFSAMP4 X19H Started      DBFSAMD1 MSDB     OPENED          NOT- AUTH
DBFSAMP4 X19H Started      DBFSAMD3 DEDB VSAM NOT- OPEN          N/A
DBFSAMP4 X19H Started      DBFSAMD2 MSDB     OPENED          NOT- AUTH
DBFSAMP4 X19H Started      DBFSAMD4          NOT- OPEN          NOT- AUTH
DBFSAMP5 X19H Started      DBFSAMD4          NOT- OPEN          NOT- AUTH
DBFSAMP6 X19H Started      DBFSAMD3 DEDB VSAM NOT- OPEN          N/A
DFHSAMD4 X19H Started      DI 21PART          NOT- OPEN          NOT- AUTH
DFHSAMD5 X19H Started      DI 21PART          NOT- OPEN          NOT- AUTH
DFHSAMI4 X19H Started      DI 21PART          NOT- OPEN          NOT- AUTH
DFHSAMI5 X19H Started      DI 21PART          NOT- OPEN          NOT- AUTH
```

Figure 121. Program-to-Database Cross-Reference View (IXPDSUMR)



```

22MAR2002 14: 31: 31 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1 ALT WIN ==>
<W1 =IXPDSUMR=====X19H=====*=====22MAR2002==14: 30: 31====MVIMS=====115
CMD Program AUTH ACCESS LDMB GDMB EEQE Non- MVS
--- Name State--- LEVEL- ---- Cnt- Recov Name
DBFSAMP1 N/A UPDT 122 N SYSC
DBFSAMP2 NOT- AUTH UPDT 123 N SYSC
DBFSAMP3 NOT- AUTH UPDT 123 N SYSC
DBFSAMP3 NOT- AUTH EXCL 121 N SYSC
DBFSAMP3 NOT- AUTH EXCL 120 N SYSC
DBFSAMP3 N/A UPDT 122 N SYSC
DBFSAMP4 NOT- AUTH EXCL 120 N SYSC
DBFSAMP4 N/A UPDT 122 N SYSC
DBFSAMP4 NOT- AUTH EXCL 121 N SYSC
DBFSAMP4 NOT- AUTH UPDT 123 N SYSC
DBFSAMP5 NOT- AUTH UPDT 123 N SYSC
DBFSAMP6 N/A UPDT 122 N SYSC
DFHSAM04 NOT- AUTH UPDT 124 N SYSC
DFHSAM05 NOT- AUTH UPDT 124 N SYSC
DFHSAM14 NOT- AUTH UPDT 124 N SYSC
DFHSAM15 NOT- AUTH UPDT 124 N SYSC

```

Figure 122. Program-to-Database Cross-Reference View, Scrolled Right

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

The following hyperlinks are provided in the IXPDSUMR view.

Hyperlink from	To see
Database	IDBSUMR view, where you can see the status of all databases the program is sensitive to and issue line commands against databases
Program Name	IPGSUMR view, where you can see more program information and modify programs

## Database Cross-Reference Summary View

The Database Cross-Reference Summary view (IXDSUMR), shown in Figure 123, allows you to cross-reference databases with the programs that use them or are associated with them.

The Database Cross-Reference Summary view lists all databases and all programs that are sensitive to each database. It also shows the IMS ID, the ID of the IMS where the transaction is executing, OS/390 name, and IMS name.

With this view, you can

- Assess the impact of any actions you might take against a database
- Hyperlink to a view where you can perform an action against a database

(Issuing line commands requires a license for MAINVIEW AutoOPERATOR for IMS.)

To display the Database Cross-Reference Summary view, type IXDSUMR on any command line within IPSM.

```

22MAR2002 14: 20: 35 ----- INFORMATION DISPLAY -----
COMMAND ==> SCROLL ==> PAGE

CURR WIN ==> 1 ALT WIN ==>

W1 =IXDSUMR=====X19H=====*=22MAR2002==14: 20: 35====MVI MS=====25

CMD Database Program Tran IMS Execute MVS IMS
--- Name Code Id IMS Id Name Name

unavail ***** X19H X19H SYSC IMS71X
BE2PCUST PTESTO** TTESTO** X19H X19H SYSC IMS71X
BE3ORDER PTESTO** TTESTO** X19H X19H SYSC IMS71X
BE3ORDRX PTESTO** TTESTO** X19H X19H SYSC IMS71X
BE3PARTS PTESTO** TTESTO** X19H X19H SYSC IMS71X
BE3PSID1 PTESTO** TTESTO** X19H X19H SYSC IMS71X
CUSTHDAM ***** X19H X19H SYSC IMS71X
CUSTHIDM ***** X19H X19H SYSC IMS71X
CUSTHISM ***** X19H X19H SYSC IMS71X
CUSTINDX ***** X19H X19H SYSC IMS71X
DBFSAMD1 DBFSAMP* FPSAMP** X19H X19H SYSC IMS71X
DBFSAMD2 DBFSAMP* FPSAMP** X19H X19H SYSC IMS71X
DBFSAMD3 DBFSAMP* ***** X19H X19H SYSC IMS71X
DBFSAMD4 DBFSAMP* ***** X19H X19H SYSC IMS71X
DI21PART DF***** X19H X19H SYSC IMS71X
IN01A01 PTESTO2 TTESTO2 X19H X19H SYSC IMS71X

```

Figure 123. Database Cross-Reference Summary View (IXDSUMR)

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

## Database-to-Program Cross-Reference View

The Database-to-Program Cross-Reference view (IXDPSUMR), shown in Figure 124 and Figure 125, shows you useful database-to-program cross-reference information.

This view lists all databases and the programs that use them. You can use this summary view to

- Assess beforehand the impact of any actions you might take against a database
- See whether needed database and program resources are available before starting a program
- Hyperlink to issue line commands against a database
- Hyperlink to issue line commands against a program

(Issuing line commands requires a license for MAINVIEW AutoOPERATOR for IMS.)

This view is especially useful for assessing the impact of taking a database offline. It provides extensive information about each program associated with a database: status, type, scheduling type, associated transaction, IMS ID and jobname, and OS/390 name.

To display the Database-to-Program Cross-Reference view, type IXDPSUMR on any command line within IPSM.

```
22MAR2002 14: 22: 48 ----- INFORMATION DISPLAY -----
COMMAND ===>
CURR WIN ===> 1          ALT WIN ===>
>W1 =IXDPSUMR=====X19H=====*=====22MAR2002==14: 22: 42====MVI MS=====115
CMD Database IMS DB DB Program Type Status Sched MVS
--- Id Status 1 Status 2 Name Type Name
BE2PCUST X19H NOT- OPEN PTEST02 BMP Started Parallel SYSC
BE2PCUST X19H NOT- OPEN PTEST01 BMP Started Parallel SYSC
BE3ORDER X19H NOT- OPEN PTEST02 BMP Started Parallel SYSC
BE3ORDER X19H NOT- OPEN PTEST01 BMP Started Parallel SYSC
BE3ORDRX X19H NOT- OPEN PTEST01 BMP Started Parallel SYSC
BE3ORDRX X19H NOT- OPEN PTEST02 BMP Started Parallel SYSC
BE3PARTS X19H NOT- OPEN PTEST02 BMP Started Parallel SYSC
BE3PARTS X19H NOT- OPEN PTEST01 BMP Started Parallel SYSC
BE3PSID1 X19H NOT- OPEN PTEST02 BMP Started Parallel SYSC
BE3PSID1 X19H NOT- OPEN PTEST01 BMP Started Parallel SYSC
CUSTHDAM X19H NOT- OPEN GBGPSBM1 TP Started Parallel SYSC
CUSTHDAM X19H NOT- OPEN GBGPSBB3 BMP Started Parallel SYSC
CUSTHDAM X19H NOT- OPEN PTEST01 BMP Started Parallel SYSC
CUSTHDAM X19H NOT- OPEN GBGPSBB1 BMP Started Parallel SYSC
CUSTHDAM X19H NOT- OPEN GBGPSBB2 BMP Started Parallel SYSC
CUSTHDAM X19H NOT- OPEN GBGPSBB4 BMP Started Parallel SYSC
```

Figure 124. Database-to-Program Cross-Reference View (IXDPSUMR)

```

22MAR2002 14:23:59 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
<W1 =IXDPSUMR=====X19H=====*=====22MAR2002==14:22:42====MVIMS=====115
CMD Database MVS  IMS
---          Name Name
      BE2PCUST SYSC IMS71X
      BE2PCUST SYSC IMS71X
      BE3ORDER SYSC IMS71X
      BE3ORDER SYSC IMS71X
      BE3ORDRX SYSC IMS71X
      BE3ORDRX SYSC IMS71X
      BE3PARTS SYSC IMS71X
      BE3PARTS SYSC IMS71X
      BE3PSID1 SYSC IMS71X
      BE3PSID1 SYSC IMS71X
      CUSTHDAM SYSC IMS71X
      CUSTHDAM SYSC IMS71X
      CUSTHDAM SYSC IMS71X
      CUSTHDAM SYSC IMS71X
      CUSTHDAM SYSC IMS71X
      CUSTHDAM SYSC IMS71X

```

Figure 125. Database-to-Program Cross-Reference View, Scrolled Right

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

The following hyperlinks are provided in the IXDPSUMR view.

Hyperlink from	To see
Database	IDBSUMR view, where you can issue line commands against the selected database
Program Name	IPGSUMR view, where you can modify the selected program

---

## Chapter 15. Managing IMS Database Activity

This chapter describes the IMS database activity views provided for users operating in the IPSM environment.

The IPSM IMS database activity views provide a powerful tool for database analysis. They make problem recognition in an N-way data sharing environment much easier. Database administrators can use the views to recognize and solve problems stemming from

- Badly organized databases
- I/O contention
- Buffer pool sizes and assignments
- Buffer cross-invalidation

While MVIMS views like STRAC and REGND identify I/O at a transaction level, the database activity views provide a database perspective. They are a system-wide resource, showing

- All DL/I calls against a database (except for DEDB, MSDB, and GSAM databases)
- All I/O activity for a database (except for DEDB, MSDB, and GSAM databases and I/O due to background write)

These views allow you to analyze I/O information as it relates to logical and physical databases. Realtime, interval, and history statistics are provided. Counts, rate, and elapsed time are reported for both DL/I calls and database I/O events.

Information is summarized in different ways, so you can solve database problems occurring at different levels. Summarization is by

- Data sharing group
- System
- Logical PCB (program control block)
- Physical database
- Volume
- Buffer pool

With the database activity views, you can examine DL/I call and I/O event information at the level of the problem that is occurring. Simply pick the view that corresponds to the type of information you need and the level at which you need to see it.

The database activity views are listed in Table 22 and Table 23 on page 178. This chapter describes and illustrates only realtime views. (The views described in this chapter are shaded in the tables). Where corresponding views from the two tables are nearly identical, only the Table 23 view is shown.

For information grouped by data sharing group, use the views listed in Table 22.

Table 22. Views that Group Information by Data Sharing Group

View name	Description	Refer to
<b>IDAGDTLR</b>	Database Activity Detail, Data Sharing Group Level (realtime)	Page 181
<b>IDAGDTL</b>	Database Activity Detail, Data Sharing Group Level (interval)	
<b>IDAGSUMR</b>	Database Activity, Data Sharing Group Level (realtime)	
<b>IDAGSUM</b>	Database Activity, Data Sharing Group Level (interval)	
<b>IDALGSMR</b>	Database Activity, Logical (PCB) Level (realtime)	Page 188
<b>IDALGSM</b>	Database Activity, Logical (PCB) Level (interval)	
<b>IDAPGSMR</b>	Database I/O Activity, Physical Database Level (realtime)	Page 190
<b>IDAPGSM</b>	Database I/O Activity, Physical Database Level (interval)	
<b>IDAXGSMR</b>	Database I/O Activity, Database/Volume Level (realtime)	Page 192
<b>IDAXGSM</b>	Database I/O Activity, Database/Volume Level (interval)	
<b>IDAVGSMR</b>	Database I/O Activity, Volume Level (realtime)	Page 194
<b>IDAVGSM</b>	Database I/O Activity, Volume Level (interval)	

For information grouped by IMS name, use the views listed in Table 23.

Table 23. Views that Group Information by IMS

View name	Description	Refer to
<b>IDASSUMR</b>	Database Activity, IMS System Level (realtime)	Page 183
<b>IDASSUM</b>	Database Activity, IMS System Level (interval)	
<b>IDASDTLR</b>	Database Activity Detail (realtime)	Page 185
<b>IDASDTL</b>	Database Activity Detail (interval)	
<b>IDALSUMR</b>	Database Activity, Logical (PCB) Level (realtime)	Page 188
<b>IDALSUM</b>	Database Activity, Logical (PCB) Level (interval)	
<b>IDAPSUMR</b>	Database I/O Activity, Physical Database Level (realtime)	Page 190
<b>IDAPSUM</b>	Database I/O Activity, Physical Database Level (interval)	
<b>IDAXSUMR</b>	Database I/O Activity, Database/Volume Level (realtime)	Page 192
<b>IDAXSUM</b>	Database I/O Activity, Database/Volume Level (interval)	
<b>IDAVSUMR</b>	Database I/O Activity, Volume Level (realtime)	Page 194
<b>IDAVSUM</b>	Database I/O Activity, Volume Level (interval)	
<b>IDABVDTR</b>	Database Activity Detail, VSAM Buffer Pool Level (realtime)	Page 196
<b>IDABVDTL</b>	Database Activity Detail, VSAM Buffer Pool Level (interval)	

Table 23. Views that Group Information by IMS (continued)

View name	Description	Refer to
<b>IDABODTR</b>	Database Activity, Detail OSAM Buffer Pool Level (realtime)	Page 198
<b>IDABODTL</b>	Database Activity, Detail OSAM Buffer Pool Level (interval)	
<b>IDABVSMR</b>	Database Activity, VSAM Buffer Pool Level (realtime)	Page 200
<b>IDABVSM</b>	Database Activity, VSAM Buffer Pool Level (interval)	
<b>IDABOSMR</b>	Database Activity, OSAM Buffer Pool Level (realtime)	Page 202
<b>IDABOSM</b>	Database Activity, OSAM Buffer Pool Level (interval)	

---

## Accessing the IMS Database Activity Views

The easiest way to access the IMS database activity views is by hyperlinking from one of the Database Activity options in an IPSM Easy Menu (EZIMS, EZISSI, or EZIFAST).

You can also display any of the views described in this chapter by entering the view name on the command line, or by entering VIEWS and then selecting the view from the list presented.

---

## Analyzing a Data Sharing Group

To analyze a data sharing group, begin with IDAGDTLR (for realtime) or IDAGDTL (for interval). You can easily hyperlink to these views from the EZISSI Easy Menu.

To look at multiple data sharing groups, begin with IDAGSUMR (for realtime) or IDAGSUM (for interval).

From IDAGDTLR or IDAGDTL view, hyperlinking from highlighted fields is an easy way to go to other views showing related information.

**Note:** To get accurate information for a data sharing group, be sure to set your context to include all IMS systems defined in that share group. To set context, use the CONtext command within one of the Easy Menus, such as EZIMS or EZISSI, before you access a specific view.

If you do not know which context name to use, you can try using CONtext ALL. That command will display information from every accessible IMS system, which may include IMS systems that are not part of your data sharing group.

---

## Analyzing an Individual IMS

To analyze one or more specific IMS systems, choose the IMS system with the CONtext command. Then begin with IDASSUMR (for realtime) or IDASSUM (for interval). You can easily hyperlink to those views from the Database Activity option in the EZIMS, EZISSI, or EZIFAST Easy Menu.

From IDASSUMR or IDASSUM view, hyperlink from any row in the IMS Name column to go to the Database Activity Detail view, IDASDTLR (for realtime) or IDASDTL (for interval). This view provides detailed information for the selected IMS system, including information that is not available in other views:

- Number of I/Os per DL/I call
- Number of databases with DL/I calls
- Number of databases with I/O in the sample period
- Number of volumes with I/O in the sample period

This additional information helps you interpret the averages, rates, and totals reported in the other fields.

Another way to analyze an individual IMS is to bypass IDASDTLR or IDASDTL view. You can hyperlink from various highlighted fields within IDASSUMR or IDASSUM view to go directly to the related information shown in other database activity views.



## Database Activity Detail View – Data Sharing Group Level

This section describes the Database Activity Detail View – Data Sharing Group Level (IDAGDTLR), which is shown in Figure 126. The view provides information about database I/O activity and DL/I calls for a data sharing group.

You can use this view to analyze I/O information as it relates to logical and physical databases. This view helps you recognize and solve N-way data sharing problems stemming from I/O contention or buffer cross-invalidation.

This view shows DL/I call and I/O event totals, rates, and average times. It does not report DEDB, MSDB, or GSAM database activity or activity caused by background write. Statistics are summarized by data sharing group. To display the Database Activity Detail View – Data Sharing Group Level, enter IDAGDTLR on any command line within IPSM.

**Note:** Only IMS systems in your context are included in the count in the Num IMS field. If any of the IMSs in your data sharing group are not included in your context, the data you receive will be incomplete.

```

22MAR2002 12:11:22 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
<W1 =IDAGDTLR=====IMSPROD==*=====22MAR2002==16:09:16====MWIMS=====1
Data Sharing Group ..... NONE Sample seconds..... 5.1
IMS Name(s)..... IMS71H
Number of IMS Systems... 1

--FULL FUNCTION DB I/O--
Total I/O Seconds 3.06
Average I/O Time... 0.003
Read I/O AVG... 0.003
Write I/O AVG... 0.000
Read I/O Rate... 177.51
Write I/O Rate... 0.00
Sync Write I/O Rate... 0.00
Read OSAM XI I/O Rate... 0.00
Databases with I/O... 1
Volumes with I/O... 2

--- DATABASE CALLS ---
DL/I Call Total Seconds.. 3.184
DL/I Call AVG Time..... 0.0038
DL/I Call Rate..... 164.89
DL/I Call Percent I/O... 96.04
DL/I Call AVG NBR I/O... 1.077
DB GU Rate..... 13.81
DB GHU Rate..... 95.86
DB GN Rate..... 13.81
DB GNP Rate..... 13.81
DB GHN Rate..... 13.81
DB GHNP Rate..... 13.81
DB ISRT Rate..... 0.00
DB REPL Rate..... 0.00
DB DLET Rate..... 0.00
DB OTHER Rate..... 0.00
Databases with calls.... 1

--- BUFFER POOLS ---
Worst VSAM Pool Hit Ratio 62.6
Worst OSAM Pool Hit Ratio 30.2

```

Figure 126. Database Activity Detail View – Data Sharing Group Level (IDAGDTLR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDAGDTLR view.

<b>Hyperlink from</b>	<b>To see</b>
Number of IMS Systems	IDASSUMR view, which shows statistics for each IMS in the data sharing group
Databases with I/O	IDAPGSMR view, which shows I/O statistics at the physical database level for the data sharing group
Volumes with I/O	IDAVGSMR view, which shows statistics for all DASD volumes incurring I/O in the data sharing group
Databases with calls	IDALGSMR view, where you can see the DL/I call and I/O statistics at the logical database level for the data sharing group
Worst VSAM Pool Hit Ratio	IDABVSMR view, where you can see activity for the VSAM buffer pools used by the data sharing group
Worst OSAM Pool Hit Ratio	IDABOSMR view, where you can see activity for the OSAM buffer pools used by the data sharing group

## Database Activity View – IMS System Level

This section describes the Database Activity View – IMS System Level (IDASSUMR), which is shown in Figure 127, Figure 128, Figure 129, and Figure 130. This view provides information about database I/O activity and DL/I calls for one or more IMS systems.

You can use this view to analyze I/O information as it relates to the logical databases. The view helps you recognize and solve N-way data sharing problems stemming from I/O contention or buffer cross-invalidation.

This view shows DL/I call and I/O event totals, rates, and average times for one or more IMS systems. It does not report DEDB, MSDB, and GSAM database activity or activity caused by background write. Statistics are summarized by IMS system.

To display the Database Activity View – IMS System Level, enter IDASSUMR on any command line within IPSM.

```
22MAR2002 12:12:42 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IDASSUMR=====IMS71H====*=====22MAR2002==12:12:42====MWIMS=====1
IMS      Data      Call Call      Call I/O  I/O      Read Read  Write Write OSAM XI
Name     ShrGrp    Rate AVG      %I/O Rate AVG    Rate AVG    Rate AVG    ReadRate
IMS71H   IMSNWAY  46.1 0.00129 90.7 48.8 0.001 48.8 0.001  0.0 0.001      0
```

Figure 127. Database Activity View – IMS System Level (IDASSUMR)

```
22MAR2002 12:12:42 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
+W1 =IDASSUMR=====IMS71H====*=====22MAR2002==12:12:42====MWIMS=====1
IMS      OSAM XI    VSAMPool OSAMPool BufferSteal VSAMBckgrd OSAMPurge GU
Name     ReadRate   HitRatio HitRatio WriteRate   WriteRate WriteRate Rate
IMS71H           0.0    63.99    36.93         0.00         0.00    0.00    3.8
```

Figure 128. Database Activity View – IMS System Level, Scrolled Right

```
22MAR2002 12:14:34 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
+W1 =IDASSUMR=====IMS71H====*=====22MAR2002==12:12:42====MWIMS=====1
IMS      GU  GHU  GHN  GHNP  GN  GNP  ISRT  DLET  REPL  Other IMS
Name     Rate Rate Rate Rate Rate Rate Rate Rate Rate Rate ID
IMS71H   3.8 26.7  3.8  3.8  3.8  3.8  0.2  0.2  0.2  0.0 H71H
```

Figure 129. Database Activity View – IMS System Level, Scrolled Right Again

```

22MAR2002 12:11:22 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
<W1 =IDASSUMR=====IMS71H==*=====08SEP2000==14:38:45====MVIMS=====1
IMS      IMS      MVS
Name     ID       Name
IMS71H   H71H     SJSC

```

Figure 130. Database Activity View – IMS System Level, Scrolled Right Again

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDASSUMR view.

Hyperlink from	To see
IMS Name	IDASDTLR view, which provides detailed information for the selected IMS system
Data ShrGrp	IDAGSUMR view, which provides the statistics for the data sharing group that the selected IMS belongs to
Call Rate	IDALSUMR view, which shows the DL/I call and I/O statistics at the logical database level for each IMS
I/O Rate	IDAPSUMR view, where you can see the I/O statistics at the physical database level for each IMS
VSAMPoolHitRatio	IDABVSMR view, which provides database I/O activity information for each IMS system, summarized at the VSAM buffer pool level
OSAMPoolHitRatio	IDABOSMR view, which provides database I/O activity information for each IMS system, summarized at the OSAM buffer pool level

---

## Database Activity Detail View

This section describes the Database Activity Detail View (IDASDTLR), which is shown in Figure 131 on page 186. This view provides detailed information about database I/O activity and DL/I calls for a selected IMS system.

This view can help you recognize and solve N-way data sharing problems stemming from I/O contention or buffer cross-invalidation. The view shows DL/I call and I/O event totals, rates, and average times. It also provides information that is not included in other database activity views:

- Number of I/Os per DL/I call
- Number of seconds (or minutes, if interval) during which the data has been collected
- Number of databases with DL/I calls
- Number of databases with I/O in the sample period
- Number of volumes with I/O in the sample period

This additional information helps you interpret the averages, rates, and totals reported in the other fields.

IDASDTLR view does not report DEDB, MSDB, and GSAM database activity or activity caused by background write. Statistics are summarized for the selected IMS system.

You can display the Database Activity Detail View in any of the following ways:

- Enter IDASDTLR on any command line within IPSM.
- Hyperlink from the Database Activity option in the EZIMS, EZISSI, or EZIFAST Easy Menu.
- Hyperlink from any row in the IMS Name column in IDASSUMR view.
- Hyperlink from the IMS Name field of IDAGSUMR view, and then hyperlink from any row in the IMS Name column of IDASSUMR view.

```

22MAR2002 15:06:14 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
W1 =IDASDTLR=====IMS71H=====22MAR2002==15:06:14====MVIMS=====1
IMS Name.....          IMS71H   Sample seconds.....          8.6
IMS ID.....            H71H
Data Sharing Group.....  IMSNWAY

--FULL FUNCTION DB I/O--
Total      I/O Seconds    15.70
Average    I/O Time...   0.001
Read       I/O AVG....   0.001
Write      I/O AVG....   0.000
Read       I/O Rate...   25.14
Write      I/O Rate...   0.00
Sync Write I/O Rate...   1.00
Read OSAM XI I/O Rate... 0.00
Databases  with I/O...   1
Volumes    with I/O...   2

--- DATABASE CALLS ---
DL/I Call Total Seconds.          17.564
DL/I Call AVG Time.....          0.0014
DL/I Call Rate.....             24.20
DL/I Call Percent I/O...         89.38
DL/I Call AVG NBR I/O...         1.039
DB GU      Rate.....             1.93
DB GHU     Rate.....            13.92
DB GN      Rate.....             1.93
DB GNP     Rate.....             1.93
DB GHN     Rate.....             1.93
DB GHNP    Rate.....             1.93
DB ISRT    Rate.....             0.19
DB REPL    Rate.....             0.19
DB DLET    Rate.....             0.19
DB OTHER   Rate.....             0.03
Databases with calls...          1

--- BUFFER POOLS ---
VSAM Bufr Pool Hit Ratio          65.1
OSAM Bufr Pool Hit Ratio          41.7

```

Figure 131. Database Activity Detail View (IDASDTLR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDASDTLR view.

Hyperlink from	To see
Data Sharing Group	IDAGSUMR view, where you can see the statistics for the data sharing group that the IMS belongs to
Databases with I/O	IDAPSUMR view, where you can see these I/O statistics at the physical database level for each IMS
Volumes with I/O	IDAVSUMR view, where you can see all the DASD volumes that have I/O occurring against them within the current time frame
Databases with calls	IDALSUMR view, where you can see these DL/I call and I/O statistics at the logical database level for each IMS
VSAM Bufr Pool Hit Ratio	IDABVSMR view, which provides database I/O activity information for each IMS system summarized at the VSAM buffer pool level
OSAM Bufr Pool Hit Ratio	IDABOSMR view, which provides database I/O activity information for each IMS system summarized at the OSAM buffer pool level

**Tuning Tip:** If a database has excessive I/O, a buffer pool may be too small. Use the VSAM Bufr Pool Hit Ratio and the OSAM Bufr Pool Hit Ratio hyperlinks to see information that can help you determine whether you need to increase the size of the buffer pool.

## Database Activity View – Logical (PCB) Level

This section describes the Database Activity View – Logical (PCB) Level (IDALSUMR or IDALGSMR). This view provides statistics about the activity of logical databases.

You can use this view to analyze database I/O and DL/I call information as it relates to the logical databases. It can help you recognize and solve N-way data sharing problems stemming from badly organized databases, I/O contention, or buffer cross-invalidation.

This view shows totals, rates, and averages for DL/I calls and I/O events. Statistics are for each open database associated with a PCB (program control block) against which DL/I calls have been made.

The database named in a PCB can be either a physical database or a logical database. Rows in this view that report on logical databases may include I/O statistics for one or more physical databases. This view does not report DEDB, MSDB, or GSAM database activity or activity caused by background write.

To display the Database Activity View – Logical (PCB) Level, enter IDALSUMR on any command line within IPSM.

IDALSUMR view is shown in Figure 132, Figure 133, and Figure 134.

```
22MAR2002 12:19:09 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IDALSUMR=====IMS71H==*=====22MAR2002==12:19:09====MVIMS=====1
PCB      Physical Call Call      Call Call      I/O  I/O  Read Read  Write Write
DBNAME   DBNAME  Rate AVG    %I/O Avg I/Os Rate AVG    Rate AVG    Rate AVG
DB1H     DB1H    125. 0.00064 20.3    0.10 13.7 0.001 11.9 0.001    1.8 0.001
```

Figure 132. Database Activity View – Logical (PCB) Level (IDALSUMR)

```
22MAR2002 12:19:37 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
+W1 =IDALSUMR=====IMS71H==*=====22MAR2002==12:19:09====MVIMS=====1
PCB      Write OSAM XI  GU  GHU  GHN  GHNP  GN  GNP  ISRT  DLET  REPL
DBNAME   AVG  ReadRate  Rate Rate  Rate  Rate  Rate  Rate  Rate  Rate  Rate
DB1H     0.001    0.0    2.0 53.6    2.0  2.0  2.0  2.0 19.8 19.8 19.8
```

Figure 133. Database Activity View – Logical (PCB) Level, Scrolled Right

```
22MAR2002 12:19:54 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
<W1 =IDALSUMR=====IMS71H==*=====22MAR2002==12:19:09====MVIMS=====1
PCB      REPL  Other IMS  IMS  Data  MVS
DBNAME   Rate  Rate  ID   Name  ShrGrp  Name
DB1H     19.8  2.2 H71H IMS71H  NONE    SJSD
```

Figure 134. Database Activity View – Logical (PCB) Level, Scrolled Right Again



For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IDALSUMR view.

Hyperlink from	To see
Physical DBNAME	IDAPSUMR view, where you can see statistics for I/O incurred against the physical databases that were accessed by DL/I calls from this PCB, whatever the PSBs it may be associated with

## Database I/O Activity View – Physical Database Level

This section describes the Database I/O Activity View – Physical Database Level (IDAPSUMR or IDAPGSMR). This view provides information about database I/O activity at the physical database level.

You can use this view to analyze I/O information as it relates to physical databases. The view can help you recognize and solve N-way data sharing problems stemming from badly organized databases, I/O contention, buffer pool sizes and assignments, or buffer cross-invalidation.

This view shows I/O event totals, rates, and average times for all open databases, excluding DEDB, MSDb, and GSAM databases and activity caused by background write. Buffer pool information is also provided.

**Note:** For VSAM databases, the Num Vols field in some cases may not reflect the actual number of volumes occupied by a specific database. This can occur (the number of volumes shown can be less than the actual number of volumes) if the database has been extended into more than one new volume and has not subsequently been closed and reopened.

If a database is extended into only one new volume, the value shown in the Num Vols field will be accurate, even if that database has not been subsequently closed and reopened.

To display the Database I/O Activity View – Physical Database Level, enter IDAPSUMR on any command line within IPSM.

IDAPSUMR view is shown in Figure 135, Figure 136, and Figure 137.

```
22MAR2002 12: 20: 46 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IDAPSUMR=====IMS71H=====22MAR2002==12: 20: 46====MVIMS=====4
Physical Database          Num   Read Read   Write Write Pool Pool
DBNAME  Type      Partition DDNAME  Vols   Rate AVG   Rate AVG   ID   Type
DB1H    PHI DAM   DB1H1    DB1H1A    1    6.3 0.001    0.0 0.000 OSM4 OSAM
DB1H    PHI DAM   DB1H2    DB1H2A    1    4.7 0.001    0.0 0.000 OSM4 OSAM
DB1H    PINDEX   DB1H2    DB1H2X    1    4.7 0.001    0.0 0.000 XXXX VSM-D
DB1H    PINDEX   DB1H1    DB1H1X    1    4.7 0.001    0.0 0.000 XXXX VSM-D
```

Figure 135. Database I/O Activity View – Physical Database Level (IDAPSUMR)

```
22MAR2002 12: 20: 46 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
+W1 =IDAPSUMR=====IMS71H=====22MAR2002==12: 20: 46====MVIMS=====4
Physical Pool      Buffer   PCB      Average      Average      Average      Average
DBNAME  Type      Size    DBNAME  NonKeyRead  KeyRead  NonKeyWrite  KeyWrite
DB1H    OSAM      4096   DB1H    0.001      0.000      0.000      0.000
DB1H    OSAM      4096   DB1H    0.001      0.000      0.000      0.000
DB1H    VSM-D     2048   DB1H    0.000      0.001      0.000      0.000
DB1H    VSM-D     2048   DB1H    0.000      0.001      0.000      0.000
```

Figure 136. Database I/O Activity View – Physical Database Level, Scrolled Right

```

22MAR2002 12:22:02 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
<W1 =IDAPSUMR=====IMS71H====*=====22MAR2002==12:20:46====MVIS=====4
Physical Average Average OSAM XI  IMS  IMS      Data  MVS
DBNAME  KeyWrite SyncWrite Read Rate ID   Name    ShrGrp  Name
DB1H    0.000   0.000      0.0 H71H IMS71H  IMSNWAY SJSC
DB1H    0.000   0.000      0.0 H71H IMS71H  IMSNWAY SJSC
DB1H    0.000   0.000      0.0 H71H IMS71H  IMSNWAY SJSC
DB1H    0.000   0.000      0.0 H71H IMS71H  IMSNWAY SJSC

```

Figure 137. Database I/O Activity View – Physical Database Level, Scrolled Right Again

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDAPSUMR view.

Hyperlink from	To see
Physical DBNAME	IDBSUMR view, which shows database status and provides commands for database management.
Num Vols	IDAXSUMR view, where you can see the statistics broken down by VSAM component and volume. You can use IDAXSUMR view to see more specifically where the I/O is occurring within a specific volume or VSAM component.
Pool ID	IDABVDTR view (for VSAM databases) or IDABODTR view (for OSAM databases). IDABVDTR and IDABODTR views show buffer pool activity for the selected buffer pool

## Database I/O Activity View – Database/Volume Level

This section describes the Database I/O Activity View – Database/Volume Level (IDAXSUMR or IDAXGSMR). This view provides information about database I/O activity at the VSAM component and database volume level.

You can use this view to analyze I/O statistics as they relate to the physical database volumes, and in the case of VSAM, as they relate to specific VSAM database components. The view can help you recognize and solve N-way data sharing problems stemming from badly organized databases, I/O contention, buffer pool sizes and assignments, or buffer cross-invalidation.

This view summarizes information by database, with one row for each volume that the database occupies. If a database occupies more than one volume, there will be more than one line per database. The view shows I/O totals, rates, and average times. Statistics are for all open databases, excluding DEDB, MSDB, and GSAM databases and activity caused by background write. Buffer pool information is also provided.

**Note:** For VSAM databases, I/O against new extents will not be attributed to a specific volume until the extended database has been closed and reopened. Until the database has been closed and reopened, the I/O will be reported as OTHER in the VolSer field.

To display the Database I/O Activity View – Database/Volume Level, enter IDAXSUMR on any command line within IPSM.

IDAXSUMR view is shown in Figure 138, Figure 139, Figure 140, and Figure 141.

```
22MAR2002 12:22:33 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IDAXSUMR=====IMS71H=====22MAR2002==12:22:33==MVIMS=====4
Physical Database
DBNAME  Type      Partition DDNAME  Type  VOLSER  Read Rate  Read AVG  Write Rate  Write AVG  Pool ID
DB1H    PHI DAM   DB1H1    DB1H1A  OSAM  BAB321  4.9 0.001  0.0 0.000  OSM4
DB1H    PHI DAM   DB1H2    DB1H2A  OSAM  BAB321  3.7 0.001  0.0 0.000  OSM4
DB1H    PI NDEX   DB1H2    DB1H2X  VSM-D BAB305  3.7 0.001  0.0 0.000  XXXX
DB1H    PI NDEX   DB1H1    DB1H1X  VSM-D BAB305  3.7 0.001  0.0 0.000  XXXX
```

Figure 138. Database I/O Activity View – Database/Volume Level (IDAXSUMR)

```
22MAR2002 12:23:08 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
+W1 =IDAXSUMR=====IMS71H=====22MAR2002==12:22:33==MVIMS=====4
Physical Pool Pool Buffer Number      Nonkey Key      NonKey Key
DBNAME  ID  Type  Size  Buffers Fixed      ReadAVG ReadAVG WriteAVG WriteAVG
DB1H    OSM4 OSAM  4096    5 BFR, BLK  0.001  0.000  0.000  0.000
DB1H    OSM4 OSAM  4096    5 BFR, BLK  0.001  0.000  0.000  0.000
DB1H    XXXX VSM-D  2048    5 BFR, BLK  0.000  0.001  0.000  0.000
DB1H    XXXX VSM-D  2048    5 BFR, BLK  0.000  0.001  0.000  0.000
```

Figure 139. Database I/O Activity View – Database/Volume Level, Scrolled Right

```

22MAR2002 12: 23: 35 ----- INFORMATION DISPLAY -----
COMMAND ==>>
CURR WIN ==> 1 ALT WIN ==>
+W1 =IDAXSUMR=====IMS71H====*=====22MAR2002==12: 22: 33====MVIMS=====4
Physical Key Sync OSAM XI Low High IMS IMS Data
DBNAME WriteAVG WriteAVG Read Rate RBA/RBN RBA/RBN ID Name ShrGrp
DB1H 0.000 0.000 0.0 0 18 H71H IMS71H IMSNWAY
DB1H 0.000 0.000 0.0 0 18 H71H IMS71H IMSNWAY
DB1H 0.000 0.000 0.0 0 347FF H71H IMS71H IMSNWAY
DB1H 0.000 0.000 0.0 0 347FF H71H IMS71H IMSNWAY

```

Figure 140. Database I/O Activity View – Database/Volume Level, Scrolled Right Again

```

22MAR2002 12: 23: 56 ----- INFORMATION DISPLAY -----
COMMAND ==>>
CURR WIN ==> 1 ALT WIN ==>
<W1 =IDAXSUMR=====IMS71H====*=====22MAR2002==12: 22: 33====MVIMS=====4
Physical Data MVS
DBNAME ShrGrp Name
DB1H IMSNWAY SJSC
DB1H IMSNWAY SJSC
DB1H IMSNWAY SJSC
DB1H IMSNWAY SJSC

```

Figure 141. Database I/O Activity View – Database/Volume Level, Scrolled Right Again

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDAXSUMR view.

Hyperlink from	To see
Physical DBNAME	IDBSUMR view, which shows database status and provides commands for database management.
VOLSER	IDAVSUMR view, where you can see statistics for all I/O to this volume, not just to this database. In IDAVSUMR view you can see how much of the I/O total is occurring to the volume
Pool ID	IDABVDTR view (for VSAM databases) or IDABODTR view (for OSAM databases), which show buffer pool activity for the selected buffer pool.

# Database I/O Activity View – Volume Level

This section describes the Database I/O Activity View – Volume Level (IDAVSUMR or IDAVGSMR). This view provides database I/O activity information at the volume level.

You can use this view to analyze I/O information as it relates to the volumes. The view can help you recognize and solve N-way data sharing problems stemming from badly organized databases, I/O contention, buffer pool sizes and assignments, or buffer cross-invalidation.

This view shows information about the database I/O activity that occurs to each volume. For each volume, it identifies I/O totals, rates, and average times for all open databases, excluding DEDB, MSDB, and GSAM databases and activity caused by background write.

**Note:** For VSAM databases, I/O against new extents will not be attributed to a specific volume until the extended database has been closed and reopened. Until the database has been closed and reopened, the I/O will be reported as OTHER in the VolSer field.

To display the Database I/O Activity View – Volume Level, enter IDAVSUMR on any command line within IPSM.

The view is shown in Figure 142 and Figure 143.

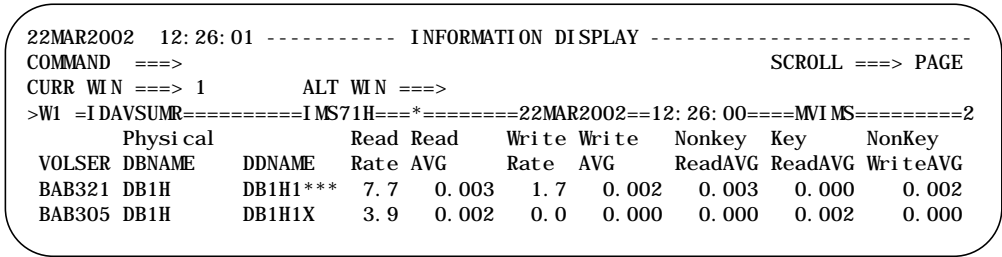


Figure 142. Database I/O Activity View – Volume Level (IDAVSUMR)

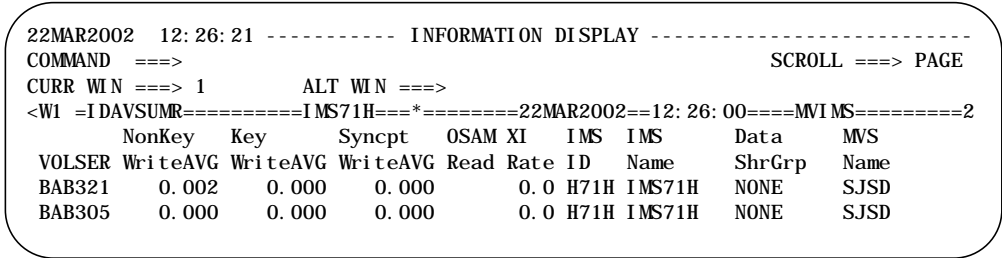


Figure 143. Database I/O Activity View – Volume Level, Scrolled Right

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlink is provided in the IDAVSUMR view.

Hyperlink from	To see
Physical DBNAME	IDAXSUMR view, where you can see the statistics broken down by VSAM component and volume. With IDAXSUMR view, you can see more specifically where the I/O is occurring within a specific volume or VSAM component.

## Database Activity Detail View – VSAM Buffer Pool Level

This section describes the Database Activity Detail View – VSAM Buffer Pool Level (IDABVDTR) which is shown in Figure 144. This view provides information about a selected VSAM buffer pool, including definitions, specifications, utilization, and database I/O activity.

The view shows buffer pool activity levels, hit ratios, the average life of a block in a buffer pool, hiperspace space utilization, and I/O statistics. The I/O statistics are for all open databases using the specified buffer pool.

The view identifies the databases that have had activity against the buffer pool and the relative I/O expense for database blocks being read, reread, or written.

You can use this view to optimize a buffer pool definition by checking to see if a pool needs more buffers. The view shows you the current relationships of databases to the buffer pool and their current performance, and you can use that information to decide which databases need to be assigned to a separate pool.

After you make buffer pool changes, you can use the time command to compare your results with the results from a prior time.

To display the Database Activity Detail View – VSAM Buffer Pool Level, enter IDABVDTR on any command line within IPSM.

```

22MAR2002 12: 26: 01 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
<W1 =IDABVDTR=====IMS71H=====22MAR2002==16: 43: 54====MWIMS=====1
  BUFFER POOL DEFINITION...      Sample Seconds.....      5
  VSAM Pool ID.....            XXXX  IMS ID.....              H71H
  VSAM Pool Number.....         4    IMS Name.....            IMS71H
  Pool Type.....                DATA MVS Name.....            SJSC
  Buffer Fix Options.....        BFR, BLK Data Sharing Group....  NONE
  Buffer Size.....               4096 Databases with I/O....    DB1H
  Number Buffers.....           5    DD Names.....            DB1H****
  Number Hiperspace Buffers.    5    VOLSERS.....            BAB3**

  BUFFER POOL STATISTICS...      RELATED I/O STATISTICS.
  Hit Ratio.....                100.00 Read I/O Rate.....      0.00
  Hiperspace Hit Ratio.....      0.00 Write I/O Rate.....      0.00
  Average Time In Pool.....      ?    Sync Write Rate.....    0.00
  CI Search Rate.....            409.05 Background Write Rate..  0.00
  Successful Hprs Read Rate.     0.00 Buffer Steal Write Rate  0.00
  Failed Hprs Read Rate.....     0.00
  Successful Hprs Write Rate     0.00
  Failed Hprs Write Rate.....    0.00

```

Figure 144. Database Activity Detail View – VSAM Buffer Pool Level (IDABVDTR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press the help key.



The following hyperlink is provided in the IDABVDTR view.

Hyperlink from	To see
Database with I/O	IDAXSUM view, where you can see the statistics broken down by VSAM component and volume. You can use IDAXSUMR view to see more specifically where the I/O is occurring within a specific volume or VSAM component.

## Database Activity Detail View – OSAM Buffer Pool Level

This section describes the Database Activity Detail View – OSAM Buffer Pool Level (IDABODTR), which is shown in Figure 145. This view provides information about a selected OSAM buffer pool, including definitions, specifications, utilization, and database I/O activity.

The view shows buffer pool activity levels, hit ratios, the average life of a block in a buffer pool, OSAM cache utilization, sequential buffering utilization, and I/O statistics. The I/O statistics are for all open databases using the specified buffer pool.

The view identifies the databases that have had activity against the buffer pool and the relative I/O expense for database blocks being read, reread, or written.

You can use this view to optimize a buffer pool definition by checking to see if a pool needs more buffers. The view shows you the current relationships of databases to the buffer pool and their current performance, and you can use that information to decide which databases need to be assigned to a separate pool.

After you make buffer pool changes, you can use the time command to compare your results with the results from a prior time.

To display the Database Activity Detail View – OSAM Buffer Pool Level, enter IDABODTR on any command line within IPSM.

22MAR2002 12: 26: 01 ----- INFORMATION DISPLAY -----			
COMMAND ==>		SCROLL ==> PAGE	
CURR WIN ==> 1		ALT WIN ==>	
<W1 =IDABODTR=====IMS71H==*=====22MAR2002==16: 43: 54====MWIMS=====1			
BUFFER POOL DEFINITION		Sample Seconds.....	5
OSAM Pool ID.....	OSM4	IMS ID.....	H71H
Buffer Fix Options....	BFR, BLK	IMS Name.....	IMS71H
OSAM Cache Option....	NoCache	MVS Name.....	SJSC
Buffer Size.....	4096	Data Sharing Group....	NONE
Number Buffers.....	5	Databases with I/O....	DB1H
		DD Names.....	DB1H****
		VOLSERS.....	BAB321
BUFFER POOL STATISTICS		RELATED I/O STATISTICS.	
Hit Ratio.....	30.06	Read I/O Rate.....	72.46
OSAM Cache Hit Ratio..	N/A	Write I/O Rate.....	0.00
OSAM Cache Search Rate	N/A	Sync Write Rate.....	0.00
Average Time In Pool..	0.02	Buffer Steal Write Rate	0.00
OSAM Block Search Rate	310.78	Purge Write Rate.....	0.00
OSAM XI IO Rate.....	0.00	SB Async Seq Read Rate.	0.00
		SB Sync Seq Read Rate..	0.00

Figure 145. Database Activity Detail View – OSAM Buffer Pool Level (IDABODTR)

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press the help key.

The following hyperlink is provided in the IDABODTR view.

Hyperlink from	To see
Database with I/O	IDAXSUM view, where you can see the statistics broken down by OSAM component and volume. You can use IDAXSUMR view to see more specifically where the I/O is occurring within a specific volume or VSAM component.

# Database Activity View – VSAM Buffer Pool Level

This section describes the Database Activity View – VSAM Buffer Pool Level (IDABVSMR), which is shown in Figure 146, Figure 147, and Figure 148. This view provides database I/O activity information for VSAM databases summarized at the buffer pool level.

You can use this view to analyze I/O information as it relates to buffer pools. The view helps you recognize and solve N-way data sharing problems stemming from badly organized databases, I/O contention, buffer pool sizes and assignments, or buffer cross-invalidation.

This view shows I/O totals, rates, and average times for all open VSAM databases.

To display the Database Activity View – VSAM Buffer Pool Level, enter IDABVSMR on any command line within IPSM.

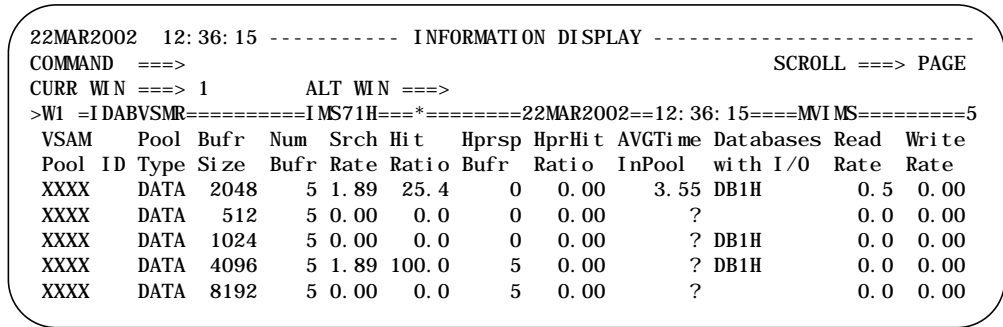


Figure 146. Database Activity View – VSAM Buffer Pool Level (IDABVSMR)

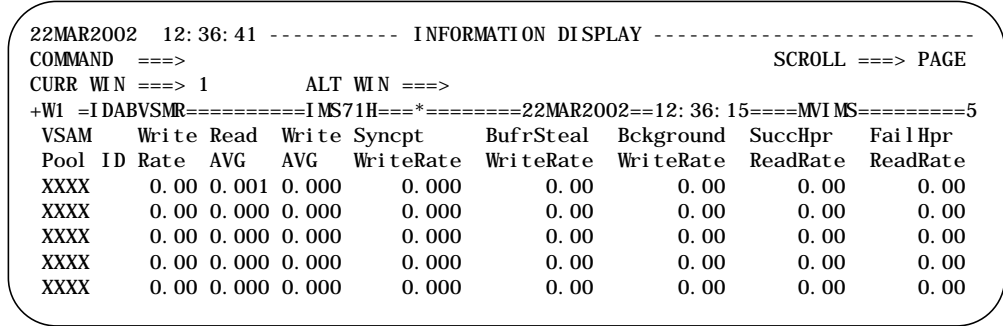


Figure 147. Database Activity View – VSAM Buffer Pool Level, Scrolled Right

22MAR2002 12:37:12 ----- INFORMATION DISPLAY -----									
COMMAND ==>					SCROLL ==> PAGE				
CURR WIN ==> 1					ALT WIN ==>				
+W1 =IDABVSMR=====IMS71H====*=====22MAR2002==12:36:15====MVIMS=====5									
VSAM	FailHpr	SuccHpr	FailHpr	Data	IMS	IMS	MVS		
Pool ID	ReadRate	WriteRate	WriteRate	Fixed	ShrGrp	ID	Name	Name	
XXXX	0.00	0.00	0.00	BFR, BLK	IMSNWAY	H71H	IMS71H	SJSC	
XXXX	0.00	0.00	0.00	BFR, BLK	IMSNWAY	H71H	IMS71H	SJSC	
XXXX	0.00	0.00	0.00	BFR, BLK	IMSNWAY	H71H	IMS71H	SJSC	
XXXX	0.00	0.00	0.00	BFR, BLK	IMSNWAY	H71H	IMS71H	SJSC	
XXXX	0.00	0.00	0.00	BFR, BLK	IMSNWAY	H71H	IMS71H	SJSC	

Figure 148. Database Activity View – VSAM Buffer Pool Level, Scrolled Right Again

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDABVSMR view.

Hyperlink from	To see
VSAM Pool ID	IDABVDTR view, where you can see a detailed view of the same buffer pool.
Databases with I/O	IDAXSUMR view, where you can see the statistics broken down by VSAM component and volume. With IDAXSUMR view, you can see more specifically where the I/O is occurring within a specific volume or VSAM component.

## Database Activity View – OSAM Buffer Pool Level

This section describes the Database Activity View – OSAM Buffer Pool Level (IDABOSMR), which is shown in Figure 149, Figure 150, and Figure 151. This view provides database I/O activity information for OSAM databases, summarized at the buffer pool level.

You can use this view to analyze I/O information as it relates to buffer pools. The view helps you recognize and solve N-way data sharing problems stemming from badly organized databases, I/O contention, buffer pool sizes and assignments, or buffer cross-invalidation.

This view shows I/O totals, rates, and average times for all open OSAM databases.

To display the Database Activity View – OSAM Buffer Pool Level, enter IDABOSMR on any command line within IPSM.

```
22MAR2002 12:37:12 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
>W1 =IDABOSMR=====IMS71H====*=====22MAR2002==12:36:15====MVIMS=====4
OSAM  Bufr  Num  Srch Hit  OSAMCach OSAMCach AvgTime Databases Read Write
Pool ID Size Bufrs Rate Ratio HitRatio Option In Pool With I/O Rate Rate
OSM4   4096   5 84.2 39.84   0.00 All           0.10 DB1H    16.90 0.00
(none) 1024   5 0.00 0.00    N/A NoCache         0.00 0.00
(none) 2048   5 0.00 0.00    N/A NoCache         0.00 0.00
(none) 8192   5 0.00 0.00    N/A NoCache         0.00 0.00
```

Figure 149. Database Activity View – OSAM Buffer Pool Level (IDABOSMR)

```
22MAR2002 12:36:41 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
+W1 =IDABOSMR=====IMS71H====*=====22MAR2002==12:36:15====MVIMS=====4
OSAM  Write Read Write Syncpt BufrSteal Purge SBASyncSeq SBSyncSeq
Pool ID Rate AVG AVG WriteRate WriteRate WriteRate ReadRate ReadRate
OSM4   0.00 0.001 0.000      0.00      0.00      0.02      0.00      0.00
(none) 0.00 0.000 0.000      0.00      0.00      0.00      0.00      0.00
(none) 0.00 0.000 0.000      0.00      0.00      0.00      0.00      0.00
(none) 0.00 0.000 0.000      0.00      0.00      0.00      0.00      0.00
```

Figure 150. Database Activity View – OSAM Buffer Pool Level, Scrolled Right

```
22MAR2002 12:37:12 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
+W1 =IDABOSMR=====IMS71H====*=====22MAR2002==12:36:15====MVIMS=====4
OSAM  SBSyncSeq Buffer Fix Data IMS IMS MVS
Pool ID ReadRate Settings ShrGrp ID Name Name
OSM4   0.00 BFR, BLK  IMSNWAY H71H IMS71H SJSC
(none) 0.00 BFR, BLK  IMSNWAY H71H IMS71H SJSC
(none) 0.00 BFR, BLK  IMSNWAY H71H IMS71H SJSC
(none) 0.00 BFR, BLK  IMSNWAY H71H IMS71H SJSC
```

Figure 151. Database Activity View – OSAM Buffer Pool Level, Scrolled Right Again

For descriptions of the fields in this view, see the online help. To display online field help, position the cursor on any field and press your help key.

The following hyperlinks are provided in the IDABOSMR view.

Hyperlink from	To see
OSAM Pool ID	IDABODTR view, where you can see a detailed view of the same buffer pool.
Databases with I/O	IDAXSUMR view, where you can see the statistics broken down by OSAM component and volume. With IDAXSUMR view, you can see more specifically where the I/O is occurring within a specific volume or OSAM component.





---

## Chapter 16. Analyzing Data Sets

This chapter discusses the data set views provided for users operating in the MAINVIEW for DBCTL IPSM environment.

You can use the IPSM data set views to analyze IMS log data sets. These views support both history and realtime data. With these views, you can

- Identify the data sets currently in use
- See the rate of block writes, both current and in history
- Discover volume information, making key IMS data sets easier to locate and manage
- Hyperlink to MAINVIEW for OS/390 to analyze volume usage information
- See the number of buffers defined and the amount of wait for buffers—across an entire sysplex

With IPSM data set views, you gain the ability to investigate the performance and status of key IMS data sets used for logging. Information is provided across multiple systems. Data set views also provide hyperlinks to JUDEV view, where you can analyze volume usage information if you have the MAINVIEW for OS/390 product installed. (See “Hyperlinks in Data Set Views” on page 206.)

The following IPSM data set views are provided:

View name	Description
<b>DSVSUMR</b>	Data Set Summary (realtime)
<b>DSVSUM</b>	Data Set Summary (interval)
<b>DSVDTLR</b>	Data Set Detail (realtime)
<b>DSVDTL</b>	Data Set Detail (interval)

---

### Accessing the Data Set Views

You can display any of the data set views described in this chapter by typing the view name on the command line, or by typing VIEWS, and then selecting the view from the list presented.

You can also hyperlink to the data set views from the Resources section of the DBCTL Easy Menu (EZIMS).

## Hyperlinks in Data Set Views

The data set views provide hyperlinks to the JUDEV view, shown in Figure 152. The JUDEV view is available in BMC Software MAINVIEW for OS/390 products. If you currently have MAINVIEW for OS/390 installed on your system, you can get important volume activity information from the JUDEV view.

For more information about the JUDEV view, refer to the *Getting Started with MAINVIEW for OS/390* manual and the *MAINVIEW for OS/390 User Guide and Reference*.

```

22MAR2002 10: 51: 50 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
WI =JUDEV=====SYSD=====*=====22MAR2002==15: 55: 52====MWMVS=====60
C Jobname  T SrvClass  %Use   %Use  Dev Vol ser  Type Mnt  Resp  Act.  %Req
- - - - -  - - - - -  ThisJob All Jobs  Num - - - - -  - - - -  Sta  Time  Rate  Qued
DCSHSMD  S STCNRM    35.99   11.06  308 BAB316 3490 PRV  12.6  8.89  0.1
BOLTWS4  T TSONRM     2.26   11.06  308 BAB317 3390 PRV  12.6  8.89  0.1
XTSTFPAS S STCPAS     0.97   11.06  308 BAB314 3390 PRV  12.6  8.89  0.1
XCFAS    S SYSTEM     0.65   11.06  308 BAB317 3390 PRV  12.6  8.89  0.1
XTSTFPAS S STCPAS     0.65   11.06  308 BAB317 3390 PRV  12.6  8.89  0.1
XTSTFPAS S STCPAS     0.65   11.06  308 BAB317 3390 PRV  12.6  8.89  0.1
AAOTSHD  S STCNRM     0.65   11.06  308 BAB317 3390 PRV  12.6  8.89  0.1
BMVRTR4  T TSONRM     0.48   11.06  308 BAB320 3390 PRV  12.6  8.89  0.1
*MASTER* S SYSTEM     0.48   11.06  308 BAB317 3380 PRV  12.6  8.89  0.1
JES2     S STCNRM     0.48   11.06  308 BAB317 3390 PRV  12.6  8.89  0.1
PTR3     T TSONRM     0.48   11.06  308 BAB315 3390 PRV  12.6  8.89  0.1
BOLJSC4  T TSONRM     0.48   11.06  308 BAB317 3390 PRV  12.6  8.89  0.1
BBEJCH1  T TSONRM     0.48   11.06  308 BAB317 3390 PRV  12.6  8.89  0.1
QA1CANDX S SYSTEM     0.48   11.06  308 BAB311 3390 PRV  12.6  8.89  0.1

```

Figure 152. MAINVIEW for OS/390 JUDEV View

The following hyperlinks are provided in the data set views.

View	Hyperlink from field	To see
DSVSUMR (Data Set Summary Realtime)	PRIME OLDS (volume serial number)	JUDEV view
	PRIME WADS (volume serial number)	
DSVSUM (Data Set Summary Interval)	PRIME OLDS (volume serial number)	JUDEV view
	PRIME WADS (volume serial number)	

View	Hyperlink from field	To see
DSVDTL (Data Set Detail Realtime)	PRIME OLDS (volume serial number)  PRIME WADS (volume serial number)	JUDEV view
DSVDTLR (Data Set Detail Interval)	PRIME OLDS (volume serial number)  PRIME WADS (volume serial number)	JUDEV view

When you hyperlink to the JUDEV view, you can see the resources that are in competition with your key IMS data sets for the same volumes. You see

- A list of jobs contending for devices during the same time interval
- The percentage of time each job used a particular device

**Note:** You cannot hyperlink to the JUDEV view from data set interval views when they are displaying historical data.

# Data Set Summary Views

The data set summary views provide data across multiple systems. These tabular views allow you to examine IMS log data set information for all the IMS systems in your sysplex.

Data set summary views show IMS name, the amount of wait for buffers, primary and secondary OLDS and WADS volumes, volume status (in use or not in use), rate of block writes to each data set per second, and the data set name.

## Data Set Summary Realtime View (DSVSUMR)

The Data Set Summary Realtime view (DSVSUMR), shown in Figure 153 and Figure 154, helps you to manage your IMS log data sets. You can view information across the entire sysplex at the moment of inquiry.

To display the Data Set Summary Realtime view, enter the view name (DSVSUMR) on any command line within IPSM.

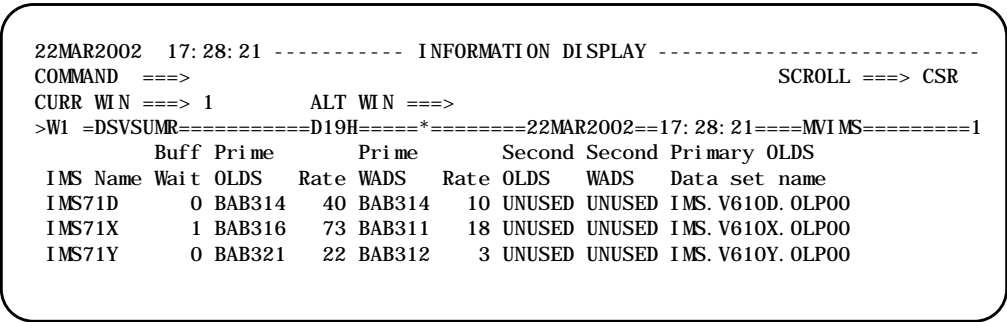


Figure 153. Data Set Summary Realtime View (DSVSUMR)

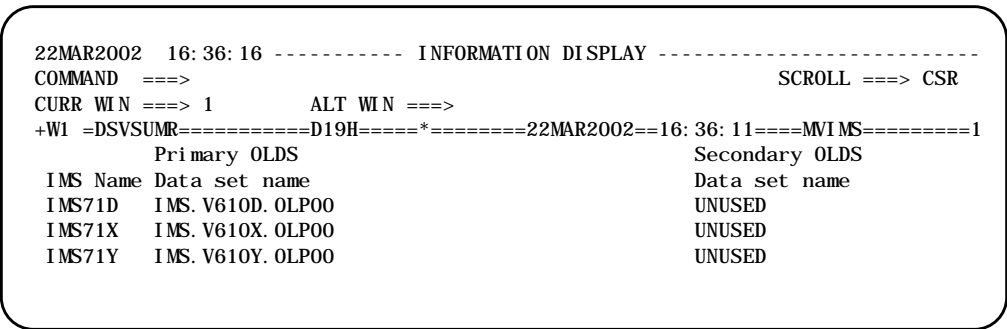


Figure 154. Data Set Summary Realtime View, Scrolled Right.

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

If you have the MAINVIEW for OS/390 product installed, you can hyperlink from the volume serial numbers shown in the PRIME OLDS and PRIME WADS fields of the Data Set Summary view. This takes you to the JUDEV view, where you can analyze volume usage information.

## Data Set Summary Interval View (DSVSUM)

The Data Set Summary Interval view (DSVSUM), shown in Figure 155 and Figure 156, allows you to examine IMS log data set information across a sysplex. With this view, you can obtain interval information or history data. You can also specify the length of the reporting interval.

**Note:** To specify the length of the reporting interval, enter TIME on the command line. For a detailed description of how to use the TIME command, see the *Using MAINVIEW* manual.

To display the Data Set Summary Interval view, enter the view name (DSVSUM) on any command line within IPSM.

```
22MAR2002 17: 11: 52 ----- INFORMATION DISPLAY -----
COMMAND ===>
CURR WIN ===> 1          ALT WIN ===>
>W1 =DSVSUM=====D19H=====*=====22MAR2002==17: 11: 52====MVI MS=====1
      Buff Prime      Prime      Second Second Primary OLDS
IMS Name Wait OLDS   Rate WADS   Rate OLDS   WADS   Data set name
IMS71D    4 BAB314    72 BAB314    12 UNUSED UNUSED IMS. V610D. OLP00
IMS71D    3 BAB314    81 BAB315    17 UNUSED UNUSED IMS. V610D. OLP00
IMS71D    0 BAB314    49 BAB311    7  UNUSED UNUSED IMS. V610D. OLP00
```

Figure 155. Data Set Summary Interval View (DSVSUM)

```
22MAR2002 16: 44: 16 ----- INFORMATION DISPLAY -----
COMMAND ===>
CURR WIN ===> 1          ALT WIN ===>
+W1 =DSVSUM=====D19H=====*=====22MAR2002==16: 44: 12====MVI MS=====1
      Primary OLDS      Secondary OLDS
IMS Name Data set name      Data set name
IMS71D   IMS. V610D. OLP00    UNUSED
IMS71D   IMS. V610D. OLP00    UNUSED
IMS71D   IMS. V610D. OLP00    UNUSED
```

Figure 156. Data Set Summary Interval View, Scrolled Right

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

If you have the MAINVIEW for OS/390 product installed, you can hyperlink from the volume serial numbers shown in the PRIME OLDS and PRIME WADS fields of the Data Set Summary Interval view. This takes you to the JUDEV view, where you can analyze volume usage information.

**Note:** You cannot hyperlink to the JUDEV view from the Data Set Summary Interval view (DSVSUM) when it is displaying historical data.

---

## Data Set Detail Views

The data set detail views provide detailed IMS log data set information for a single IMS. Although data set detail views show all the information provided by summary views, they do not require scrolling to see all the data.

Data set detail views show the IMS name, interval date and time, amount of wait for buffers, primary and secondary OLDS and WADS volumes, volume status (in use or not in use), and rate of block writes to each per second. Also provided is an OLDS buffers defined field, which shows the number of buffers statically defined for use in logging.

### Data Set Detail Realtime View (DSVDTLR)

The Data Set Detail Realtime view (DSVDTLR), shown in Figure 157, allows you to see detailed statistics about the log data sets for a selected IMS at the moment of inquiry.

To display the Data Set Detail Realtime view, enter the view name (DSVDTLR) on any command line within IPSM.

```
22MAR2002  19: 12: 19 ----- INFORMATION DISPLAY -----
COMMAND  ==>
CURR WIN ==> 1          ALT WIN ==>
W1 =DSVDTLR=====D19H=====*=====22MAR2002==19: 12: 18====MVI MS=====1
IMS Name..... IMS71D
Interval Date..... 22MAR2002
Interval Time..... 19: 12

Wait for buffer.....      0
OLDS rate per second.      4
WADS rate per second.      1
OLDS buffers defined.      2

Primary OLDS volume. . BAB315      IMS. V610D. OLP01
Secondary OLDS volume UNUSED
Primary WADS volume. . BAB314      IMS. V610D. WADSO
Secondary WADS volume UNUSED
```

Figure 157. Data Set Detail Realtime View (DSVDTLR)

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

If you have the MAINVIEW for OS/390 product installed, you can hyperlink from the volume serial numbers shown in the PRIME OLDS and PRIME WADS fields of the Data Set Detail Realtime view. This takes you to the JUDEV view, where you can analyze volume usage information.

## Data Set Detail Interval View (DSVDTL)

The Data Set Detail Interval view (DSVDTL), shown in Figure 158, allows you to see detailed statistics about the log data sets for a selected IMS. With this view, you can obtain interval information or history data. You can also specify the length of the reporting interval.

To display the Data Set Detail Interval view, enter the view name (DSVDTL) on any command line within IPSM.

```
22MAR2002 19:35:05 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1          ALT WIN ==>
W1 =DSVDTL=====D19H=====*=22MAR2002==19:35:04====MVI MS=====1
IMS Name..... IMS71D
Interval Date..... 22MAR2002
Interval Time..... 19:35

Wait for buffer..... 4
OLDS rate per second. 76
WADS rate per second. 17
OLDS buffers defined. 2

Primary OLDS volume.. BAB315      IMS. V610D. OLP01
Secondary OLDS volume UNUSED
Primary WADS volume.. BAB314      IMS. V610D. WADSO
Secondary WADS volume UNUSED
```

Figure 158. Data Set Detail Interval View (DSVDTL)

For descriptions of the fields in this view, see online help. To display online field help, position the cursor on any field, and then press the help key.

If you have the MAINVIEW for OS/390 product installed, you can hyperlink from the volume serial numbers shown in the PRIME OLDS and PRIME WADS fields of the Data Set Detail Realtime view to access the JUDEV view, where you can analyze volume usage information.

**Note:** You cannot hyperlink to the JUDEV view from the Data Set Detail Interval view (DSVDTL) when it is displaying historical data.





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## Part 5. Managing IPSM

This part describes system administration and operations views used to define an IMS workload and set and control the sampling of a target system.

<b>Chapter 17. Setting Target Samplers</b> .....	<b>215</b>
ISAMP – Sampler Administration .....	215
ISAMPD – Sampler Administration Detail .....	217
Controlling Sampler Defaults .....	218
<b>Chapter 18. Controlling Samplers</b> .....	<b>219</b>
ISAMPOP – Sampler Operations Administration .....	219
ISAMPOPD – Sampler Operations Administration Detail .....	220
<b>Chapter 19. Securing IPSM Resources</b> .....	<b>221</b>
SERDEF – Security Resource Definitions .....	221
SERDEFE – Security Resource Definition Detail .....	222
<b>Chapter 20. Viewing a List of BMC Software IMS Products</b> .....	<b>223</b>
Accessing the Product Views .....	223
BMC Software Products Summary View .....	224
BMC Software Products Detail View .....	225



# Chapter 17. Setting Target Samplers

A sampler makes periodic observations of the state of one or more target IMS systems. These observations are accumulated and presented as performance information in the workflow and components of response time (CORT) views. The rate of sampling and the types of information collected can be controlled by using sampler definition parameters. Administrative views let you add or change sampler definitions for targets.

Sampler parameter definitions are shown by the ISAMP and ISAMPD system administration views.

## ISAMP – Sampler Administration

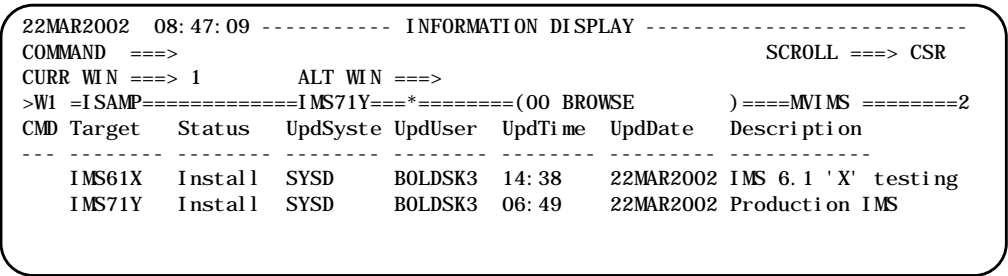


Figure 159. ISAMP View

You can select the ISAMP view at any time by typing one of the following view names on the command line:

- COMMAND ==> ISAMP
- COMMAND ==> ADMIN

ADMIN groups views by system and operations administration functions and is available from the MAIN menu when IPSM starts. Select ISAMP from the list of ADMIN views.

- COMMAND ==> VIEWS

Select ISAMP from the list of views.

To add a new target sampler definition or change an existing one, you must first type the following on the command line:

COMMAND ==> EDIT

The window information line changes from **BROWSE** to **EDIT**. In edit mode, you can use

- Primary commands to
  - **ADD** a new definition
  - **CANCEL** any changes made  
This discards any changes made to the definition since the last save.
  - **SAVE** a definition you have added or changed
  - **END** your edit session  
This saves any changes you made and redisplay the previous view.
- Line commands to select an existing definition to
  - **ADD** a definition using one you selected as a model
  - **CHAnge** the selected definition
  - **DELete** the selected definition
  - **UNDelete** or recover the selected definition if it is not saved
  - **INStall** or activate the selected definition

Online help describes how to use these commands. Select the view name, press the help key, and then select Actions from the help window.

## ISAMPD – Sampler Administration Detail

22MAR2002 09:24:50 ----- INFORMATION DISPLAY -----									
COMMAND ==>					SCROLL ==> CSR				
CURR WIN ==> 1					ALT WIN ==>				
W1 =ISAMPD=====IMS71Y====*(00 BROWSE )====MVIMS =====1									
Target.....	IMS51Y		Time1	Time2	Time3	Time4	Time5		
Status.....	Install	Start Time.....	09:21	09:22	09:24	09:25	09:29		
Update Info		End Time.....	09:22	09:23	09:25	09:29	24:00		
System....	SYSD	--- Samplers---							
User.....	BOLDSK3	Workflow data..	N	Y	Y	Y	Y		
Time.....	09:13	CORT data.....	Y	Y	Y	Y	Y		
Date.....	22MAR2002	Sample Rate...	1	2	3	4	5		
Deleted....	N	Extended I/O..	N	Y	Y	Y	Y		
		Extended Latch	N	N	Y	Y	Y		
		Extended Lock.	N	N	N	Y	Y		
		Workload.....	N	N	N	Y	N		

Figure 160. ISAMPD View

ISAMPD shows detailed information about the status and parameters in effect for a target selected from the ISAMP view. It shows the current values of the parameters. The values shown may not be in effect if the parameters have changed and

- Changes were activated with the INStall command, but not SAVED

The status of the sampler definition is Install. The installed parameters are in effect.

- Changed sampler parameters were SAVED, but not INStalled

The status of the sampler definition is Modified. The saved parameters are the current values. Saved changes are activated when they are installed or the PAS (product address space) is restarted.

You can use the ADD primary command from this view to add parameters for another target using this definition as a model. To add a new target sampler definition, you must first enter the following on the command line:

```
COMMAND ==> EDIT
```

The window information line changes from BROWSE to EDIT.

Online help describes how to use these commands. Select the view name, press the help key, and then select Actions from the help window.

## Controlling Sampler Defaults

If you do not define a sampling for a target, default sampler parameters are used. These parameters specify a sampling period of 24 hours a day at 2 times a second to collect all information for workflow and CORT views. You can change this by adding a sampler definition named DEFAULT. When this definition exists, the parameters specified for it are used instead of the distributed sampler defaults.

To create the sampler DEFAULT target definition, you ADD the definition from the ISAMP or ISAMPD view as follows:

1. COMMAND ===> ISAMP
2. ADD a definition for a target and name it DEFAULT

You can use either the primary command as shown below or the ADD line command if you want to use previously defined target sampler parameters as a model. Enter the following:

- a. COMMAND ===> EDIT

You must be in an EDIT session before you can use either a primary or line command.

- b. COMMAND ===> ADD

The ADD command displays the following ISAMP dialog box:

```
22MAR2002 09:24:50 ----- INFORMATION DISPLAY -----
COMMAND ===>
CURR WIN ===> 1          ALT WIN ===>
>W1 =ISAMP=====IMS71X==*===== (00 EDIT          ) ===MVIS=====4
-----
| ADD PLEXUS SAMPLER DEFINITION |
| COMMAND ===>                  |
| Target      ===> DEFAULT      |
| Description ===> SITE SAMPLER DEFAULTS |
|-----|
| Start End   WFlow CORT Samp ---Extended--- |
| Time  Time  Data  Data Rate I/O  Latch Lock  Wkl d |
| 1 00:00 24:00 YES  YES  2  YES  YES  YES  YES |
| 2 |
| 3 |
| 4 |
| 5 |
| hh:mm hh:mm - YES/NO-- 1-5 ----- YES/NO----- |
| |
| Press End to add the definition. Enter CANCEL to leave without adding. |
|-----|
```

Figure 161. ISAMP View Dialog Box

Specify a target name of DEFAULT as shown above and change the parameters to those that you want to use as the defaults for all targets. That allows you to change the sampler defaults for all your targets at once and create unique sampler definitions for specific targets. To do this, the BBPARM data set must be shared by all PASs.

# Chapter 18. Controlling Samplers

The state of target IMSs is sampled periodically 24 hours a day, 2 times a second by default or as defined by a sets (or sets) of user-specified sampler parameters, as described in Chapter 17, “Setting Target Samplers” on page 215. The samplings are accumulated and used by the workflow and components of response time (CORT) views.

Using operations views, you can

- See if a target is being sampled
- Control the current state of a sampling with stop, start, or quiesce commands

These views are ISAMPOP and ISAMPOPD.

## ISAMPOP – Sampler Operations Administration

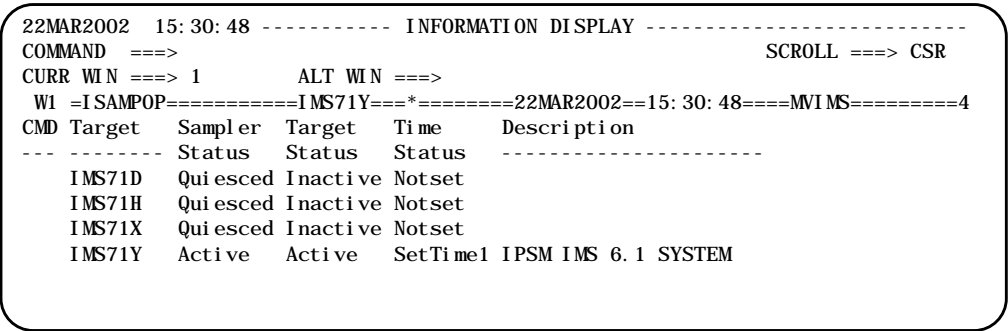


Figure 162. ISAMPOP View

You can select the ISAMPOP view at any time by typing one of the following commands on the command line:

- COMMAND ==> ISAMPOP
- COMMAND ==> ADMIN

ADMIN groups views by system and operations administration functions and is available from the MAIN menu when IPSM starts. Select ISAMPOP from the list of ADMIN views.

- COMMAND ==> VIEWS

Select ISAMPOP from the list of views.

From this view, you can use the following line commands to control target sampling:

STArt	Start sampling the selected IMS target
STOp	Stop sampling the selected IMS target
Quiesce	Put the target sampling in a latent state

Online help describes how to use these commands. Select the view name, press the help key, and then select Actions from the help window.

# ISAMPOPD – Sampler Operations Administration Detail

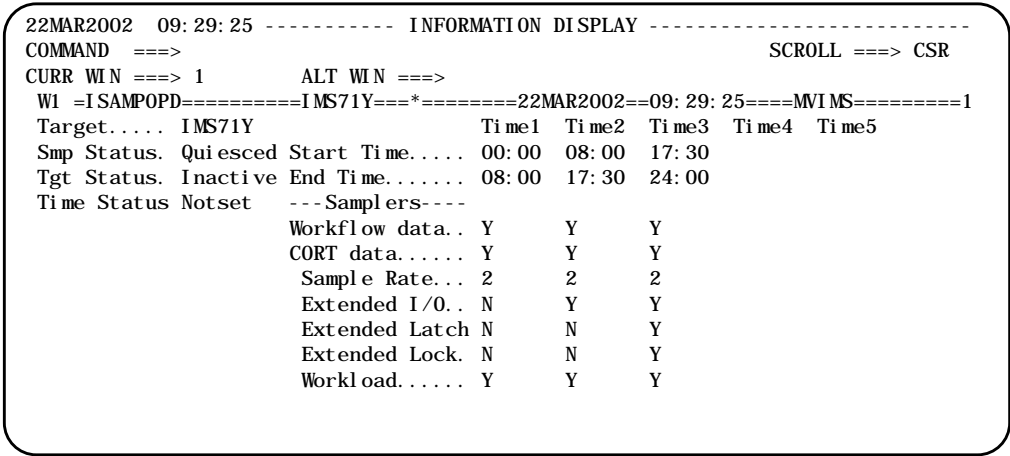


Figure 163. ISAMPOPD View

ISAMPOPD shows detailed information about the status and parameters in effect for a target selected from the ISAMPOP view. It can help you determine when data will be collected for that target.



# Chapter 19. Securing IPSM Resources

External security managers (ESM), such as CA-ACF2, CA-TOP SECRET, or RACF can be used to protect access to a product and its resources, such as views, view actions or commands, and data. Product resources are identified to your ESM as a resource entity that can be protected so that existing security rules, permits, or profiles can be used.

Using the security resource administration views, you can see the access authorizations that are enabled for the IPSM resources by default. These views are SERDEF and SERDEFE. You can use them to enable, disable, and change security resource definitions. For information about securing resources, see *Implementing Security for MAINVIEW Products*.

## SERDEF – Security Resource Definitions

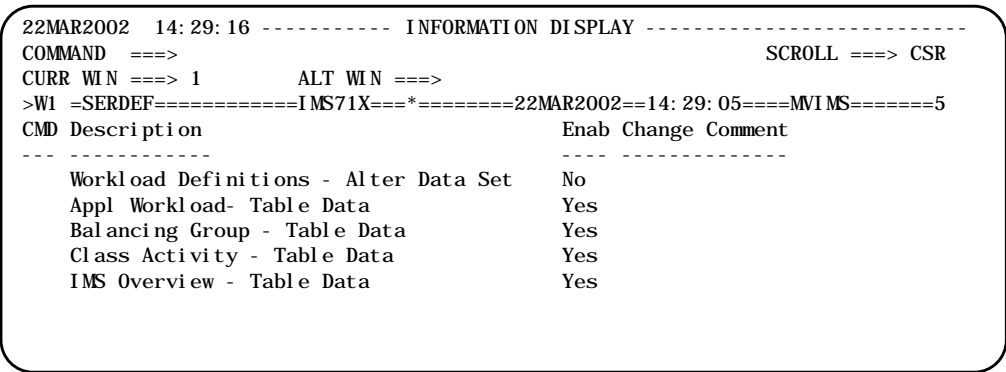


Figure 164. SERDEF View

You can select the SERDEF view at any time by typing one of the following commands on the command line:

- COMMAND ===> SERDEF
- COMMAND ===> VIEWS

Select SERDEF from the list of views presented.

- COMMAND ===> ADMIN

Select SERDEF from the list of views presented in ADMIN. (ADMIN groups views by system and operations administration functions and is available from the MAIN menu when IPSM starts.)

You can use the SERDEF view to disable or enable resource definitions, or to select a single resource definition to view and change its attributes.

To see online help for SERDEF view or any of its fields, position the cursor on the view name on the window information line, or on any field in the view, and then press the help key. See the *Implementing Security for MAINVIEW Products* manual for a detailed description of how to use this view.

# SERDEFE – Security Resource Definition Detail

```
22MAR2002 14:30:29 ----- INFORMATION DISPLAY -----
COMMAND ==>
CURR WIN ==> 1      ALT WIN ==>
>W1 =SERDEFE=====IMS71X====*=====22MAR2002==14:29:05====MVIMS=====1
  Res Key... BBF9PA40PURG Desc.... Transaction - Action - Purge
    Enabled... Yes      Comment... *Unchanged*
                        Type.... ACTION
  ESM Info--
    Class.... SBBM      Entity... BBM.&PRODUCT.&CONTEXT.&INTTABLE.&INTACTI
    VolSer... *NONE*    Intent... READ
    LogAuth... Allow    LogFail... Allow
  Substitution Values
    IntTable.. FPA40     ExtTable.. Tran
    IntAction. PURGE     ExtAction PURGE
    IntActTab. BBFPA40   Product.. MVIMS
    Parms?... No        Fields?... Yes
  Update Info
    UpdSystem. *NONE*    Mem Suff. 00
    UpdUser... *NONE*    UpdTime.. 14:29:08
    UpdDate... &windate.
  Res Version
    Version... 1         Release.. 1
                        ModLevel. 0
```

Figure 165. SERDEFE View

SERDEFE shows detailed information about a resource definition selected from the SERDEF view. It shows the class and entity names and other attributes for that definition. To change a definition’s attributes, you can use the commands described in online action help or in the *Implementing Security for MAINVIEW Products* manual.

---

## Chapter 20. Viewing a List of BMC Software IMS Products

This chapter explains how to use the IMSplex System Manager (IPSM) IMS product views to display a list of BMC Software performance products that are active in each IMS control region associated with an MVIMS PAS.

The IMS product views

- Provide a list of BMC Software IMS-related products that are active in the same IMS control region as the MVIMS target
- Include online help that describes the products and what each can provide.
- Provide the product release and maintenance level
- Indicate product status

The following IMS product views are provided:

<b>View name</b>	<b>Description</b>
<b>IPRDSUM</b>	BMC Software Products Summary
<b>IPRDDTL</b>	BMC Software Products Detail

---

### Accessing the Product Views

You can access the IMS product views by selecting the Installed Products option on the

- IMS Easy Menus (EZIMS and EZIMSR)
- IMS Fast Menus (EZIFAST and EZIFASTR)
- IMS SSI Menus (EZISSI and EZISSIR)

If you select the Installed Products option on EZIMS, EZIMSR, EZIFAST, or EZIFASTR, you access IPRDDTL view. If you select the option on EZISSI or EZISSIR, you access IPRDSUM view.

You can also display the IMS product views by

- Entering the view name on a command line
- Entering VIEWS on the command line and selecting the view from the list of views
- Entering MAIN on the command line, selecting IMSPRODS, and selecting either of the two product views from IMSPRODS view list

## BMC Software Products Summary View

The BMC Software Products Summary view (IPRDSUM) displays a summary of the BMC Software IMS products that are installed in the IMS control regions in the context set by the user. You can hyperlink from the IPRDSUM Count field to access a view that shows every installation for a specific product.

The view displays one row for each installed product, and the Count field shows how many IMS systems have the associated product installed. For each type of product, IPRDSUM shows

- Status of the product
- The product's version, release, and maintenance level
- The product's IMS and OS/390 systems

22MAR2002 12: 11: 22 ----- INFORMATION DISPLAY -----					
COMMAND ==>			SCROLL ==> PAGE		
CURR WIN ==> 1			ALT WIN ==>		
W1 =IPRDSUM=====IMS71X==*=====22MAR2002====06: 43: 47====MVIS=====4					
Product		Product	Product	IMS	MVS
Name	Count	Status	Level	Name	Name
AutoOPERATOR for IMS	1	ACTIVE	V6. 1. 00	IMS71X	SJSD
MainView for IMS	1	ACTIVE	V3. 3. 00	IMS71X	SJSD
Q: MANAGER IMS	1	ACTIVE	V2. 3. 01	IMS71X	SJSD
Q: MANAGER IMS EP	1	ACTIVE	V2. 3. 01	IMS71X	SJSD

Figure 166. BMC Software Products Summary View (IPRDSUM)

The help for the Product Name field provides brief product descriptions. For information about the fields on the view, position your cursor on any field and press the help key.

The following hyperlink is provided in the IPRDSUM view.

Hyperlink from...	To see...
Count	IPRDDTL view, which shows information about each IMS product installation

# BMC Software Products Detail View

The BMC Software Products Detail view (IPRDDTL) displays a list of the BMC Software IMS products that are installed in the IMS control regions in the context set by the user.

The view displays one row for each IMS a product is installed on, and for each product installation it shows

- Status of the product
- The product’s version, release, and maintenance level
- The product’s IMS and OS/390 systems

If you access this view by hyperlinking from IPRDSUM, the view displays only information about the product you selected on IPRDSUM. If you access the view by its name, it displays information about all installations of BMC Software IMS products.

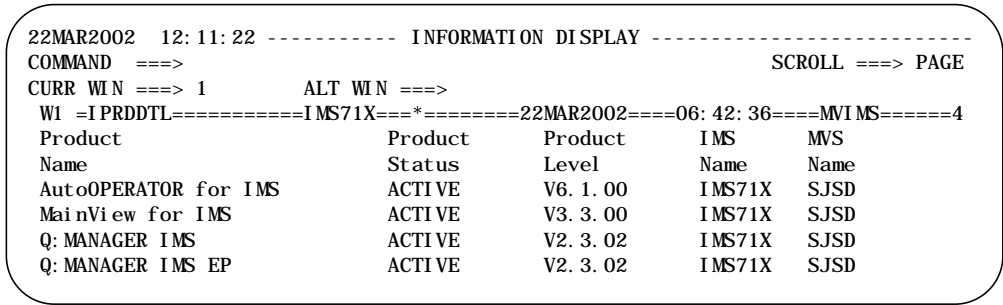


Figure 167. BMC Software Products Detail View (IPRDDTL)

The help for the Product Name field provides brief product descriptions. For information about the fields on the view, position your cursor on any field and press the help key.



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## Part 6. Glossary and Index

Glossary .....	229
Index .....	241





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# Glossary

This glossary defines BMC Software terminology. Other dictionaries and glossaries can be used in conjunction with this glossary.

Since this glossary pertains to BMC Software-related products, some of the terms defined might not appear in this book.

To help you find the information you need, this glossary uses the following cross-references:

<b>Contrast with</b>	Indicates a term that has a contrary or contradictory meaning.
<b>See</b>	Indicates an entry that is a synonym or contains expanded information.
<b>See also</b>	Indicates an entry that contains related information.

---

## A

**action.** Defined operation, such as modifying a MAINVIEW window, that is performed in response to a command. *See* object.

**active window.** Any MAINVIEW window in which data can be refreshed. *See* alternate window, current window, window.

**administrative view.** Display from which a product's management tasks are performed, such as the DSLIST view for managing historical data sets. *See* view.

**ALT WIN field.** Input field that allows you to specify the window identifier for an alternate window where the results of a hyperlink are displayed. *See* alternate window.

**Alternate Access.** *See* MAINVIEW Alternate Access.

**alternate form.** View requested through the FORM command that changes the format of a previously displayed view to show related information. *See also* form, query.

**alternate window.** (1) Window that is specifically selected to display the results of a hyperlink. (2) Window whose identifier is defined to the ALT WIN field. *Contrast with* current window. *See* active window, window, ALT WIN field.

**analyzer.** (1) Online display that presents a snapshot of status and activity data and indicates problem areas. (2) Component of CMF MONITOR. *See* CMF MONITOR Analyzer.

**application.** (1) Program that performs a specific set of tasks within a MAINVIEW product. (2) In MAINVIEW VistaPoint, combination of workloads to enable display of their transaction performance data in a single view.

**application trace.** *See* trace.

**ASCH workload.** Workload comprising Advanced Program-to-Program Communication (APPC) address spaces.

**AutoCustomization.** Online facility for customizing the installation of products. AutoCustomization provides an ISPF panel interface that both presents customization steps in sequence and provides current status information about the progress of the installation.

**automatic screen update.** Usage mode wherein the currently displayed screen is refreshed automatically with new data at an interval you specify. Invoked by the ASU command.

## B

**batch workload.** Workload consisting of address spaces running batch jobs.

**BBI.** Basic architecture that distributes work between workstations and multiple OS/390 targets for BMC Software MAINVIEW products.

**BBI-SS PAS.** *See* BBI subsystem product address space.

**BBI subsystem product address space (BBI-SS PAS).** OS/390 subsystem address space that manages communication between local and remote systems and that contains one or more of the following products:

- Command MQ for S/390
- MAINVIEW AutoOPERATOR
- MAINVIEW for CICS
- MAINVIEW for DB2
- MAINVIEW for DBCTL
- MAINVIEW for IMS Online
- MAINVIEW for MQSeries
- MAINVIEW SRM
- MAINVIEW VistaPoint (for CICS, DB2, DBCTL, and IMS workloads)

**BBPARM.** *See* parameter library.

**BBPROC.** *See* procedure library.

**BBPROF.** *See* profile library.

**BBSAMP.** *See* sample library.

**BBV.** *See* MAINVIEW Alternate Access.

**BBXS.** BMC Software Subsystem Services. Common set of service routines loaded into common storage and used by several BMC Software MAINVIEW products.

**border.** Visual indication of the boundaries of a window.

**bottleneck analysis.** Process of determining which resources have insufficient capacity to provide acceptable service levels and that therefore can cause performance problems.

## C

**CA-Disk.** Data management system by Computer Associates that replaced the DMS product.

**CAS.** Coordinating address space. One of the address spaces used by the MAINVIEW windows environment architecture. The CAS supplies common services and enables communication between linked systems. Each OS/390 or z/OS image requires a separate CAS. Cross-system communication is established through the CAS using VTAM and XCF communication links.

**CFMON.** *See* coupling facility monitoring.

**chart.** Display format for graphical data. *See also* graph.

**CICSplex.** User-defined set of one or more CICS systems that are controlled and managed as a single functional entity.

**CMF MONITOR.** Comprehensive Management Facility MONITOR. Product that measures and reports on all critical system resources, such as CPU, channel, and device usage; memory, paging, and swapping activity; and workload performance.

**CMF MONITOR Analyzer.** Batch component of CMF MONITOR that reads the SMF user and 70 series records created by the CMF MONITOR Extractor and/or the RMF Extractor and formats them into printed system performance reports.

**CMF MONITOR Extractor.** Component of CMF that collects performance statistics for CMF MONITOR Analyzer, CMF MONITOR Online, MAINVIEW for OS/390, and RMF postprocessor. *See* CMF MONITOR Analyzer, CMF MONITOR Online, MAINVIEW for OS/390.

**CMF MONITOR Online.** Component of CMF that uses the MAINVIEW window interface to present data on all address spaces, their use of various system resources, and the delays that each address space incurs while waiting for access to these resources. *See* CMF MONITOR, MAINVIEW for OS/390.

**CMF Type 79 API.** Application programming interface, provided by CMF, that provides access to MAINVIEW SMF-type 79 records.

**CMFMON.** Component of CMF MONITOR that simplifies online retrieval of information about system hardware and application performance and creates MAINVIEW SMF-type 79 records.

The CMFMON *online facility* can be used to view data in one or more formatted screens.

The CMFMON *write facility* can be used to write collected data as MAINVIEW SMF-type 79 records to an SMF or sequential data set.

**CMRDETL.** MAINVIEW for CICS data set that stores detail transaction records (type 6E) and abend records (type 6D). Detail records are logged for each successful transaction. Abend records are written when an abend occurs. Both records have the same format when stored on CMRDETL.

**CMRSTATS.** MAINVIEW for CICS data set that stores both CICS operational statistic records, at five-minute intervals, and other records, at intervals defined by parameters specified during customization (using CMRSOPT).

**column.** Vertical component of a view or display, typically containing fields of the same type of information, that varies by the objects associated in each row.

**collection interval.** Length of time data is collected. *See also* delta mode, total mode.

**command delimiter.** Special character, usually a ; (semicolon), used to stack commands typed concurrently on the COMMAND line for sequential execution.

**COMMAND line.** Line in the control area of the display screen where primary commands can be typed. *Contrast with* line command column.

**Command MQ Automation D/S.** Command MQ agents, which provide local proactive monitoring for both MQSeries and MSMQ (Microsoft message queue manager). The Command MQ agents operate at the local node level where they continue to perform functions regardless of the availability of the MQM (message queue manager) network. Functionality includes automatic monitoring and restarts of channels, queue managers, queues and command servers. In cases where automated recovery is not possible, the agents transport critical alert information to a central console.

**Command MQ Automation S/390.** Command MQ component, which monitors the MQM (message queue manager) networks and intercedes to perform corrective actions when problems arise. Solutions include:

- Dead-Letter Queue management
- System Queue Archival
- Service Interval Performance solutions
- Channel Availability

These solutions help ensure immediate relief to some of the most pressing MQM operations and performance problems.

**Command MQ for D/S.** Command MQ for D/S utilizes a true client/server architecture and employs resident agents to provide configuration, administration, performance monitoring and operations management for the MQM (message queue manager) network.

**Command MQ for S/390.** See MAINVIEW for MQSeries.

**COMMON STORAGE MONITOR.** Component of MAINVIEW for OS/390 that monitors usage and reconfigures OS/390 or z/OS common storage blocks.

**composite workload.** Workload made up of a WLM workload or other workloads, which are called *constituent workloads*.

**constituent workload.** Member of a composite workload. Constituent workloads in a composite usually belong to a single workload class, but sometimes are mixed.

**contention.** Occurs when there are more requests for service than there are servers available.

**context.** In a Plex Manager view, field that contains the name of a target or group of targets specified with the CONTEXT command. See scope, service point, SSI context, target context.

**CONTEXT command.** Specifies either a MAINVIEW product and a specific target for that product (see target context) or a MAINVIEW product and a name representing one or more targets (see *SSI context*) for that product.

**control statement.** (1) Statement that interrupts a sequence of instructions and transfers control to another part of the program. (2) Statement that names samplers and other parameters that configure the MAINVIEW components to perform specified functions. (3) In CMF MONITOR, statement in a parameter library member used to identify a sampler in the extractor or a report in the analyzer, or to describe either component's processing requirements to the operating system.

**coupling facility monitoring (CFMON).** Coupling facility views that monitor the activity of your system's coupling facilities.

**current data.** Data that reflects the system in its current state. The two types of current data are realtime data and interval data. *Contrast with* historical data. See also interval data and realtime data.

**current window.** In the MAINVIEW window environment, window where the main dialog with the application takes place. The current window is used as the default window destination for commands issued on the COMMAND line when no window number is specified. *Contrast with* alternate window. See active window, window.

## D

**DASD.** Direct Access Storage Device. (1) A device with rotating recording surfaces that provides immediate access to stored data. (2) Any device that responds to a DASD program.

**data collector.** Program that belongs to a MAINVIEW product and that collects data from various sources and stores the data in records used by views. For example, MAINVIEW for OS/390 data collectors obtain data from OS/390 or z/OS services, OS/390 or z/OS control blocks, CMF MONITOR

Extractor control blocks, and other sources. *Contrast with* extractor.

**delta mode.** (1) In MAINVIEW for DB2 analyzer displays, difference between the value sampled at the start of the current statistics interval and the value sampled by the current analyzer request. See also *statistics interval*. (2) In CMFMON, usage mode wherein certain columns of data reflect the difference in values between one sample cycle and the next. Invoked by the DELTA ON command. See also collection interval, sample cycle, total mode.

**DFSMS.** Data Facility Storage Management System. Data management, backup, and HSM software from IBM for OS/390 or z/OS mainframes.

**DMR.** See MAINVIEW for DB2.

**DMS.** Data Management System. See CA-Disk.

**DMS2HSM.** See MAINVIEW SRM DMS2HSM.

**DSO.** Data Set Optimizer. CMF MONITOR Extractor component that uses CMF MONITOR Extractor data to produce reports specifying the optimal ordering of data sets on moveable head devices.

## E

**EasyHSM.** See MAINVIEW SRM EasyHSM.

**EasyPOOL.** See MAINVIEW SRM EasyPOOL.

**EasySMS.** See MAINVIEW SRM EasySMS.

**element.** (1) Data component of a data collector record, shown in a view as a field. (2) Internal value of a field in a view, used in product functions.

**element help.** Online help for a field in a view. The preferred term is *field help*.

**Enterprise Storage Automation.** See MAINVIEW SRM Enterprise Storage Automation.

**event.** A message issued by Enterprise Storage Automation. User-defined storage occurrences generate events in the form of messages. These events provide an early warning system for storage problems and are routed to user-specified destinations for central viewing and management.

**Event Collector.** Component for MAINVIEW for IMS Online, MAINVIEW for IMS Offline, and MAINVIEW for DBCTL that collects data about events in the IMS environment. This data is required for Workload Monitor and optional for Workload Analyzer (except for the workload trace service). This data also is recorded as transaction records (X'FA') and program records (X'F9') on the IMS system log for later use by the MAINVIEW for IMS Offline components: Performance Reporter and Transaction Accountant.

**expand.** Predefined link from one display to a related display. See also hyperlink.

**extractor.** Program that collects data from various sources and keeps the data control blocks to be written as records. Extractors obtain data from services, control blocks, and other sources. *Contrast with* data collector.

**extractor interval.** *See* collection interval.

## F

**fast path.** Predefined link between one screen and another. To use the fast path, place the cursor on a single value in a field and press Enter. The resulting screen displays more detailed information about the selected value. *See also* hyperlink.

**field.** Group of character positions within a screen or report used to type or display specific information.

**field help.** Online help describing the purpose or contents of a field on a screen. To display field help, place the cursor anywhere in a field and press PF1 (HELP). In some products, field help is accessible from the screen help that is displayed when you press PF1.

**filter.** Selection criteria used to limit the number of rows displayed in a view. Data that does not meet the selection criteria is not displayed. A filter is composed of an element, an operator, and an operand (a number or character string). Filters can be implemented in view customization, through the PARM/QPARM commands, or through the Where/QWhere commands. Filters are established against elements of data.

**fire.** The term used to indicate that an event has triggered an action. In MAINVIEW AutoOPERATOR, when a rule selection criteria matches an incoming event and *fires*, the user-specified automation actions are performed. This process is also called *handling* the event.

**fixed field.** Field that remains stationary at the left margin of a screen that is scrolled either right or left.

**FOCAL POINT.** MAINVIEW product that displays a summary of key performance indicators across systems, sites, and applications from a single terminal.

**form.** One of two constituent parts of a view; the other is query. A form defines how the data is presented; a query identifies the data required for the view. *See also* query, view.

**full-screen mode.** Display of a MAINVIEW product application or service on the entire screen. There is no window information line. *Contrast with* windows mode.

## G

**global command.** Any MAINVIEW window interface command that can affect all windows in the window area of a MAINVIEW display.

**graph.** Graphical display of data that you select from a MAINVIEW window environment view. *See also* chart.

## H

**hilevel.** For MAINVIEW products, high-level data set qualifier required by a site's naming conventions.

**historical data.** (1) Data that reflects the system as it existed at the end of a past recording interval or the duration of several intervals. (2) Any data stored in the historical database and retrieved using the TIME command. *Contrast with* current data, interval data and realtime data.

**historical database.** Collection of performance data written at the end of each installation-defined recording interval and containing up to 100 VSAM clusters. Data is extracted from the historical database with the TIME command. *See* historical data.

**historical data set.** In MAINVIEW products that display historical data, VSAM cluster file in which data is recorded at regular intervals.

**HSM.** (Hierarchical Storage Management) Automatic movement of files from hard disk to slower, less-expensive storage media. The typical hierarchy is from magnetic disk to optical disk to tape.

**hyperlink.** (1) Preset field in a view or an EXPAND line on a display that permits you to

- Access cursor-sensitive help
- Issue commands
- Link to another view or display

The transfer can be either within a single product or to a related display/view in a different BMC Software product. Generally, hyperlinked fields are highlighted. (2) Cursor-activated short path from a topic or term in online help to related information. *See also* fast path.

## I

**Image log.** Collection of screen-display records. Image logs can be created for both the BBI-SS PAS and the BBI terminal session (TS).

The BBI-SS PAS Image log consists of two data sets that are used alternately: as one fills up, the other is used. Logging to the BBI-SS PAS Image log stops when both data sets are filled and the first data set is not processed by the archive program.

The TS Image log is a single data set that wraps around when full.

**IMSplex System Manager (IPSM).** MVIMS Online and MVDBC service that provides Single System Image views of resources and bottlenecks for applications across one or more IMS regions and systems.

**interval data.** Cumulative data collected during a collection interval. Intervals usually last from 15 to 30 minutes depending on how the recording interval is specified during product customization. *Contrast with* historical data.

**Note:** If change is made to the workloads, a new interval will be started.

See also current data and realtime data.

**InTune.** Product for improving application program performance. It monitors the program and provides information used to reduce bottlenecks and delays.

**IRUF.** IMS Resource Utilization File (IRUF). IRUFs can be either detail (one event, one record) or summarized (more than one event, one record). A detail IRUF is created by processing the IMS system log through a program called IMFLEDIT. A summarized IRUF is created by processing one or more detail IRUFs, one or more summarized IRUFs, or a combination of both, through a sort program and the TASCOSTR program.

## J

**job activity view.** Report about address space consumption of resources. See view.

**journal.** Special-purpose data set that stores the chronological records of operator and system actions.

**Journal log.** Collection of messages. Journal logs are created for both the BBI-SS PAS and the BBI terminal session (TS).

The BBI-SS PAS Journal log consists of two data sets that are used alternately: as one fills up, the other is used. Logging to the BBI-SS PAS Journal log stops when both data sets are filled and the first data set is not being processed by the archive program.

The TS Journal log is a single data set that wraps around when full.

## L

**line command.** Command that you type in the line command column in a view or display. Line commands initiate actions that apply to the data displayed in that particular row.

**line command column.** Command input column on the left side of a view or display. Contrast with COMMAND line.

**Log Edit.** In the MAINVIEW for IMS Offline program named IMFLEDIT, function that extracts transaction (X'FA') and program (X'F9') records from the IMS system log. IMFLEDIT also extracts certain records that were recorded on the system log by IMS. IMFLEDIT then formats the records into a file called the IMS Resource Utilization File (IRUF).

## M

**MAINVIEW.** BMC Software integrated systems management architecture.

**MAINVIEW Alarm Manager.** In conjunction with other MAINVIEW products, notifies you when an exception condition occurs. MAINVIEW Alarm Manager is capable of monitoring multiple systems simultaneously, which means that MAINVIEW Alarm Manager installed on one system keeps track of your entire sysplex. You can then display a single view that show exceptions for all MAINVIEW performance monitors within your OS/390 or z/OS enterprise.

**MAINVIEW Alternate Access.** Enables MAINVIEW products to be used without TSO by providing access through EXCP and VTAM interfaces.

**MAINVIEW Application Program Interface.** REXX- or CLIST-based, callable interface that allows MAINVIEW AutoOPERATOR EXECs to access MAINVIEW monitor product view data.

**MAINVIEW AutoOPERATOR.** Product that uses tools, techniques, and facilities to automate routine operator tasks and provide online performance monitoring, and that achieves high availability through error minimization, improved productivity, and problem prediction and prevention.

**MAINVIEW control area.** In the MAINVIEW window environment, first three lines at the top of the view containing the window information line and the COMMAND, SCROLL, CURR WIN, and ALT WIN lines. The control area cannot be customized and is part of the information display. Contrast with MAINVIEW display area, MAINVIEW window area.

**MAINVIEW display area.** See MAINVIEW window area.

**MAINVIEW Explorer.** Product that provides access to MAINVIEW products from a Web browser running under Windows. MAINVIEW Explorer replaces MAINVIEW Desktop.

**MAINVIEW for CICS.** Product (formerly MV MANAGER for CICS) that provides realtime application performance analysis and monitoring for CICS system management.

**MAINVIEW for DB2.** Product (formerly MV MANAGER for DB2) that provides realtime and historical application performance analysis and monitoring for DB2 subsystem management.

**MAINVIEW for DBCTL.** Product (formerly MV MANAGER for DBCTL) that provides realtime application performance analysis and monitoring for DBCTL management.

**MAINVIEW for IMS (MVIMS) Offline.** Product with a Performance Reporter component that organizes data and prints reports used to analyze IMS performance and a Transaction Accountant component that produces cost accounting and user charge-back records and reports.

**MAINVIEW for IMS (MVIMS) Online.** Product that provides realtime application performance analysis and monitoring for IMS management.

**MAINVIEW for IP.** Product that monitors OS/390 mission-critical application performance as it relates to IP stack usage. Collected data includes: connections, response time statistics, application availability, application throughput, and IP configuration.

**MAINVIEW for Linux-Servers.** Product that allows you to monitor the performance of your Linux systems from the MAINVIEW windows interface.

**MAINVIEW for MQSeries.** Delivers comprehensive capabilities for configuration, administration, performance monitoring and operations management for an entire MQM (message queue manager) network.

**MAINVIEW for OS/390.** System management application (known as MAINVIEW for MVS prior to version 2.5). Built upon the MAINVIEW window environment architecture, it uses the window interface to provide access to system performance data and other functions necessary in the overall management of an enterprise.

**MAINVIEW for UNIX System Services.** System management application that allows you to monitor the performance of the Unix System Services from a MAINVIEW window interface.

**MAINVIEW for VTAM.** Product that displays application performance data by application, transaction ID, and LU name. This collected data includes: connections, response time statistics, application availability, and application throughput.

**MAINVIEW for WebSphere.** Product that provides Web monitoring and management for applications integrated with IBM WebSphere Application Server for OS/390 or z/OS.

**MAINVIEW Selection Menu.** ISPF selection panel that provides access to all MAINVIEW windows-mode and full-screen mode products.

**MAINVIEW SRM.** *See* MAINVIEW Storage Resource Manager (SRM).

**MAINVIEW SRM DMS2HSM.** Product that facilitates the conversion of CA-Disk, formerly known as DMS, to HSM.

**MAINVIEW SRM EasyHSM.** Product that provides online monitoring and reporting to help storage managers use DFHSM efficiently.

**MAINVIEW SRM EasyPOOL.** Product that provides control over data set allocation and enforcement of allocation and naming standards. EasyPOOL functions operate at the operating system level to intercept normal job processing, thus providing services without any JCL changes.

**MAINVIEW SRM EasySMS.** Product that provides tools that aid in the conversion to DFSMS and provides enhancement to the DFSMS environment after implementation. EasySMS consists of the EasyACS functions, the SMSACSTE function, and the Monitoring and Positioning Facility.

**MAINVIEW SRM Enterprise Storage Automation.** Product that delivers powerful event generation and storage automation technology across the storage enterprise. Used in conjunction with MAINVIEW AutoOPERATOR, automated solutions to perform pool, volume, application, or data set-level manipulation can be created and used in response to any condition or invoked to perform ad hoc requests

**MAINVIEW SRM SG-Auto.** Product that provides early warning notification of storage anomalies and automated responses to those anomalies based on conditions in the storage subsystem.

**MAINVIEW SRM SG-Control.** Product that provides real-time monitoring, budgeting, and control of DASD space utilization.

**MAINVIEW SRM StopX37/II.** Product that provides enhancements to OS/390 or z/OS space management, reducing the incidence of space-related processing problems. The StopX37/II functions operate at the system level to intercept abend conditions or standards violations, thus providing services without any JCL changes.

**MAINVIEW SRM StorageGUARD.** Product that monitors and reports on DASD consumption and provides historical views to help control current and future DASD usage.

**MAINVIEW Storage Resource Manager (SRM).** Suite of products that assists in all phases of OS/390 or z/OS storage management. MAINVIEW SRM consists of products that perform automation, reporting, trend analysis, and error correction for storage management.

**MAINVIEW SYSPROG Services.** *See* SYSPROG Services.

**MAINVIEW VistaPoint.** Product that provides enterprise-wide views of performance. Application and workload views are available for CICS, DB2, DBCTL, IMS, and OS/390. Data is summarized at the level of detail needed; for example, views can be for a single target, an OS/390 or z/OS image, or an entire enterprise.

**MAINVIEW window area.** Portion of the information display that is not the control area and in which views are displayed and windows opened. It includes all but the first three lines of the information display. *Contrast with* MAINVIEW control area.

**monitor.** Online service that measures resources or workloads at user-defined intervals and issues warnings when user-defined thresholds are exceeded.

**Multi-Level Automation (MLA).** The user-defined, multiple step process in Enterprise Storage Automation that implements solutions in a tiered approach, where solutions are invoked one after another until the condition is resolved.

**MVALARM.** *See* MAINVIEW Alarm Manager.

**MVAPI.** *See* MAINVIEW Application Program Interface.

**MVCICS.** *See* MAINVIEW for CICS.

**MVDB2.** *See* MAINVIEW for DB2.

**MVDBC.** *See* MAINVIEW for DBCTL.

**MVIMS.** *See* MAINVIEW for IMS.

**MVLNX.** *See* MAINVIEW for Linux-Servers.

**MVMQ.** *See* MAINVIEW for MQSeries.

**MVMVS.** *See* MAINVIEW for OS/390.

**MVScope.** MAINVIEW for OS/390 application that traces both CPU usage down to the CSECT level and I/O usage down to the channel program level.

**MVSRM.** *See* MAINVIEW Storage Resource Manager (SRM).

**MVSRMHSM.** *See* MAINVIEW SRM EasyHSM.

**MVSRMSGC.** *See* MAINVIEW SRM SG-Control.

**MVSRMSGD.** *See* MAINVIEW SRM StorageGUARD.

**MVSRMSGP.** *See* MAINVIEW SRM StorageGUARD.

**MVVP.** *See* MAINVIEW VistaPoint.

**MVVTAM.** *See* MAINVIEW for VTAM.

**MVWEB.** *See* MAINVIEW for WebSphere.

## N

**nested help.** Multiple layers of help pop-up windows. Each successive layer is accessed by clicking a hyperlink from the previous layer.

## O

**object.** Anything you can manipulate as a single unit. MAINVIEW objects can be any of the following: product, secondary window, view, row, column, or field.

You can issue an action against an object by issuing a line command in the line command column to the left of the object. *See* action.

**OMVS workload.** Workload consisting of OS/390 OpenEdition address spaces.

**online help.** Help information that is accessible online.

**OS/390 and z/OS Installer.** BMC Software common installation system for mainframe products.

**OS/390 product address space (PAS).** Address space containing OS/390 or z/OS data collectors, including the CMF MONITOR Extractor. Used by the MAINVIEW for OS/390, MAINVIEW for Unix System Services, and CMF MONITOR products. *See* PAS.

## P

**parameter library.** Data set consisting of members that contain parameters for specific MAINVIEW products or a support component. There can be several versions:

- The distributed parameter library, called BBPARM
- A site-specific parameter library or libraries

These can be

- A library created by AutoCustomization, called UBBPARM
- A library created manually, with a unique name

**PAS.** Product address space. Used by the MAINVIEW products. Contains data collectors and other product functions. *See* OS/390 product address space (PAS), BBI subsystem product address space (BBI-SS PAS).

**performance group workload.** Collection of address spaced defined to OS/390 or z/OS. If you are running OS/390 or z/OS with WLM in compatibility mode, MAINVIEW for OS/390 creates a performance group workload instead of a service class. *See* service class workload, workload definition.

**PERFORMANCE MANAGER.** MAINVIEW for CICS online service for monitoring and managing current performance of CICS regions.

**Performance Reporter (MVIMS Offline).** MVIMS Offline component that organizes data and prints reports that can be used to analyze IMS performance.

**Performance Reporter.** Product component that generates offline batch reports. The following products can generate these reports:

- MAINVIEW for DB2
- MAINVIEW for CICS

**Plex Manager.** Product through which cross-system communication, MAINVIEW security, and an SSI context are established and controlled. Plex Manager is shipped with MAINVIEW window environment products as part of the coordinating address space (CAS) and is accessible as a menu option from the MAINVIEW Selection Menu.

**PRGP workload.** In MVS/SP 5.0 or earlier, or in compatibility mode in MVS/SP 5.1 or later, composite of service classes. MAINVIEW for OS/390 creates a performance group workload for each performance group defined in the current IEAIPS.xx member.

**procedure library.** Data set consisting of members that contain executable procedures used by MAINVIEW AutoOPERATOR. These procedures are execute command lists (EXECs) that automate site functions. There can be several versions:

- The distributed parameter library, called BBPROC
- A site-specific parameter library or libraries

These can be

- A library created by AutoCustomization, called UBBPROC
- A library created manually, with a unique name

The site-created EXECs can be either user-written or customized MAINVIEW AutoOPERATOR-supplied EXECs from BBPROC.

**product address space.** *See* PAS.

**profile library.** Data set consisting of members that contain profile information and cycle refresh definitions for a terminal session connected to a BBI-SS PAS. Other members are dynamically created by MAINVIEW applications. There can be several versions:

- The distributed profile library, called BBPROF
- A site-specific profile library or libraries

These can be

- A library created by AutoCustomization, called SBBPROF
- A library created manually, with a unique name

The site library is a common profile shared by all site users. The terminal session CLIST creates a user profile automatically if one does not exist; it is called userid.BBPROF, where userid is your logon ID. User profile libraries allow each user to specify unique PF keys, CYCLE commands, target system defaults, a Primary Option Menu, and a unique set of application profiles.

## Q

**query.** One of two constituent parts of a view; the other is form. A query defines the data for a view; a form defines the display format. *See also* form, view.

## R

**realtime data.** Performance data as it exists at the moment of inquiry. Realtime data is recorded during the smallest unit of time for data collection. *Contrast with* historical data. *See also* current data and interval data.

**Resource Analyzer.** Online realtime displays used to analyze IMS resources and determine which are affected by specific workload problems.

**Resource Monitor.** Online data collection services used to monitor IMS resources and issue warnings when defined utilization thresholds are exceeded.

**row.** (1) Horizontal component of a view or display comprising all the fields pertaining to a single device, address space, user, etc. (2) Horizontal component of a DB2 table consisting of a sequence of values, one for each column of the table.

**RxD2.** Product that provides access to DB2 from REXX. It provides tools to query the DB2 catalog, issue dynamic SQL, test DB2 applications, analyze EXPLAIN data, generate DDL or DB2 utility JCL, edit DB2 table spaces, perform security administration, and much more.

## S

**sample cycle.** Time between data samples.

For the CMF MONITOR Extractor, this is the time specified in the extractor control statements (usually 1 to 5 seconds).

For realtime data, the cycle is not fixed. Data is sampled each time you press Enter.

**sample library.** Data set consisting of members each of which contains one of the following:

- Sample JCL that can be edited to perform specific functions
- A macro that is referenced in the assembly of user-written services
- A sample user exit routine

There can be several versions:

- The distributed sample library, called BBSAMP
- A site-specific sample library or libraries

These can be

- A library created by AutoCustomization, called UBBSAMP
- A library created manually, with a unique name

**sampler.** Program that monitors a specific aspect of system performance. Includes utilization thresholds used by the Exception Monitor. The CMF MONITOR Extractor contains samplers.

**SBBPROF.** *See* profile library.

**scope.** Subset of an SSI context. The scope could be all the data for the context or a subset of data within the context. It is user- or site-defined. *See* SSI context, target.

**screen definition.** Configuration of one or more views that have been stored with the SAVEScr command and assigned a unique name. A screen includes the layout of the windows and the view, context, system, and product active in each window.

**selection view.** In MAINVIEW products, view displaying a list of available views.

**service class workload.** Collection of address spaces defined to OS/390 or z/OS. If you are running Workload Manager (WLM) in goal mode, MAINVIEW for OS/390 creates a service class workload for each service class that you define through WLM definition dialogs.

If you are running MVS 4.3 or earlier, or MVS/SP 5.1 or later with WLM in compatibility mode, MVS creates a performance group workload instead of a service class. *See* performance group workload.

**service objective.** Workload performance goal, specified in terms of response time for TSO workloads or turnaround time for batch workloads. Performance group workloads can be measured by either objective. Composite workload service objectives consist of user-defined weighting factors assigned to each constituent workload. For compatibility mode, neither OS/390 nor z/OS provides any way to measure service.



**service point.** Specification, to MAINVIEW, of the services required to enable a specific product. Services can be actions, selectors, or views. Each target (for example, CICS, DB2, or IMS) has its own service point.

The PLEX view lists all the defined service points known to the CAS to which the terminal session is connected.

**service request block (SRB).** Control block that represents a routine to be dispatched. SRB mode routines generally perform work for the operating system at a high priority. An SRB is similar to a task control block (TCB) in that it identifies a unit of work to the system. *See also* task control block.

**service select code.** Code entered to invoke analyzers, monitors, and general services. This code is also the name of the individual service.

**session.** Total period of time an address space has been active. A session begins when monitoring can be performed. If the product address space (PAS) starts after the job, the session starts with the PAS.

**SG-Auto.** *See* MAINVIEW SRM SG-Auto.

**SG-Control.** *See* MAINVIEW SRM SG-Control.

**single system image (SSI).** Feature of the MAINVIEW window environment architecture where you can view and perform actions on multiple OS/390 systems as though they were a single system. The rows of a single tabular view can contain rows from different OS/390 or z/OS images.

**Skeleton Tailoring Facility.** A facility in MAINVIEW AutoOPERATOR that allows skeleton JCL to be used during job submission. Skeleton JCL can contain variables within the JCL statements to be substituted with data values at job submission time. Directive statements can be used in the skeleton JCL to cause the repetition of a set of skeleton statements. This facility functions similar to the TSO skeleton tailoring facility.

**SRB.** *See* service request block.

**SSI.** *See* single system image.

**SSI context.** Name created to represent one or more targets for a given product. *See* context, target.

**started task workload.** Address spaces running jobs that were initiated programmatically.

**statistics interval.** For MAINVIEW for DB2, cumulative count within a predefined interval (30-minute default set by the DB2STATS parameter in the distributed BBPARM member BBIISP00) for an analyzer service DELTA or RATE display. Specifying the DELTA parameter displays the current value as the difference between the value sampled by the current analyzer request and the value sampled at the start of the current interval. Specifying the RATE parameter displays the current value by minute (DELTA divided by the number of elapsed minutes).

**stem variables.** A REXX facility, supported in MAINVIEW AutoOPERATOR REXX EXECs and the Skeleton Tailoring Facility, where variable names end with a period followed by a

number, such as &POOL.1. This configuration allows each variable to actually represent a table or array of data, with the zero variable containing the number of entries in the array. For example, &POOL.0 = 5 would indicate variables &POOL.1 through &POOL.5 exist.

**StopX37/II.** *See* MAINVIEW SRM StopX37/II.

**StorageGUARD.** *See* MAINVIEW SRM StorageGUARD.

**summary view.** View created from a tabular view using the Summarize option in view customization. A summary view compresses several rows of data into a single row based on the summarize criteria.

**SYSPROG services.** Component of MAINVIEW for OS/390. Over 100 services that detect, diagnose, and correct OS/390 or z/OS system problems as they occur. Accessible from the OS/390 Performance and Control Main Menu. Note that this component is also available as a stand-alone product MAINVIEW SYSPROG Services.

**system resource.** *See* object.

## T

**target.** Entity monitored by one or more MAINVIEW products, such as an OS/390 or z/OS image, an IMS or DB2 subsystem, a CICS region, or related workloads across systems. *See* context, scope, SSI context.

**target context.** Single target/product combination. *See* context.

**TASCOSTR.** MAINVIEW for IMS Offline program that summarizes detail and summary IMS Resource Utilization Files (IRUFs) to be used as input to the offline components.

**task control block (TCB).** Address space-specific control block that represents a unit of work that is dispatched in the address space in which it was created. *See also* service request block.

**TCB.** *See* task control block.

**terminal session (TS).** Single point of control for MAINVIEW products, allowing data manipulation and data display and providing other terminal user services for MAINVIEW products. The terminal session runs in a user address space (either a TSO address space or a standalone address space for EXCP/VTAM access).

**TDIR.** *See* trace log directory.

**threshold.** Specified value used to determine whether the data in a field meets specific criteria.

**TLDS.** *See* trace log data set.

**total mode.** Usage mode in CMFMON wherein certain columns of data reflect the cumulative value between collection intervals. Invoked by the DELTA OFF command. *See also* collection interval, delta mode.

**trace.** (1) Record of a series of events chronologically listed as they occur. (2) Online data collection and display services that track transaction activity through DB2, IMS, or CICS.

**trace log data set (TLDS).** Single or multiple external VSAM data sets containing summary or detail trace data for later viewing or printing. The trace log(s) can be defined as needed or dynamically allocated by the BBI-SS PAS. Each trace request is assigned its own trace log data set(s).

**trace log directory (TDIR).** VSAM linear data set containing one entry for each trace log data set. Each entry indicates the date and time of data set creation, the current status of the data set, the trace target, and other related information.

**transaction.** Specific set of input data that initiates a predefined process or job.

**Transaction Accountant.** MVIMS Offline component that produces cost accounting and user charge-back records and reports.

**TS.** *See* terminal session.

**TSO workload.** Workload that consists of address spaces running TSO sessions.

## U

**UAS.** *See* user address space.

**UBBPARM.** *See* parameter library.

**UBBPROC.** *See* procedure library.

**UBBSAMP.** *See* sample library.

**user address space.** Runs a MAINVIEW terminal session (TS) in TSO, VTAM, or EXCP mode.

**User BBPROF.** *See* profile library.

## V

**view.** Formatted data within a MAINVIEW window, acquired from a product as a result of a view command or action. A view consists of two parts: query and form. *See also* form, job activity view, query.

**view definition.** Meaning of data that appears online, including source of data, selection criteria for data field inclusion and placement, data format, summarization, context, product, view name, hyperlink fields, and threshold conditions.

**view command.** Name of a view that you type on the COMMAND line to display that view.

**view command stack.** Internal stack of up to 10 queries. For each command, the stack contains the filter parameters, sort order, context, product, and timeframe that accompany the view.

**view help.** Online help describing the purpose of a view. To display view help, place the cursor on the view name on the window information line and press PF1 (HELP).

## W

**window.** Area of the MAINVIEW screen in which views and resources are presented. A window has visible boundaries and can be smaller than or equal in size to the MAINVIEW window area. *See* active window, alternate window, current window, MAINVIEW window area.

**window information line.** Top border of a window. Shows the window identifier, the name of the view displayed in the window, the system, the scope, the product reflected by the window, and the timeframe for which the data in the window is relevant. *See also* window status field.

**window number.** Sequential number assigned by MAINVIEW to each window when it is opened. The window number is the second character in the window status field. *See also* window status field.

**window status.** One-character letter in the window status field that indicates when a window is ready to receive commands, is busy processing commands, is not to be updated, or contains no data. It also indicates when an error has occurred in a window. The window status is the first character in the window status field. *See also* window information line, window status field.

**window status field.** Field on the window information line that shows the current status and assigned number of the window. *See also* window number, window status.

**windows mode.** Display of one or more MAINVIEW product views on a screen that can be divided into a maximum of 20 windows. A window information line defines the top border of each window. *Contrast with* full-screen mode.

**WLM workload.** In goal mode in MVS/SP 5.1 and later, a composite of service classes. MAINVIEW for OS/390 creates a workload for each WLM workload defined in the active service policy.

**workflow.** Measure of system activity that indicates how efficiently system resources are serving the jobs in a workload.

**workload.** (1) Systematic grouping of units of work (e.g., address spaces, CICS transactions, IMS transactions) according to classification criteria established by a system administrator. (2) In OS/390 or z/OS, a group of service classes within a service definition.

**workload activity view.** Tracks workload activity as the workload accesses system resources. A workload activity view measures workload activity in terms of resource consumption and how well the workload activity meets its service objectives.

**Workload Analyzer.** Online data collection and display services used to analyze IMS workloads and determine problem causes.

**workload definition.** Workload created through the WKLIST view. Contains a unique name, a description, an initial status, a current status, and selection criteria by which address spaces are selected for inclusion in the workload. *See* Workload Definition Facility.

**Workload Definition Facility.** In MAINVIEW for OS/390, WKLIST view and its associated dialogs through which workloads are defined and service objectives set.

**workload delay view.** Tracks workload performance as the workload accesses system resources. A workload delay view measures any delay a workload experiences as it contends for those resources.

**Workload Monitor.** Online data collection services used to monitor IMS workloads and issue warnings when defined thresholds are exceeded.

**workload objectives.** Performance goals for a workload, defined in WKLIST. Objectives can include measures of performance such as response times and batch turnaround times.



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# Index

## A

- adding a sampler 215
- administrative views 213
- AO request delays 55
- application
  - events by transaction 77
  - trace 83
- area views
  - description 143–144
  - views 145–149

## B

- BBFTWK00 BBPARM member 106

## C

- CA-ACF2 219
- calls, DL/I 79
- CA-TOP SECRET 219
- CICS thread monitors 99
- command
  - execution delay 55
- composite name, workload group 105
- confidence level
  - in views 49
- controlling
  - sampler 217
- CPU
  - paging 27
  - utilization 27, 28
- creating workload definitions 105
- cross-reference views
  - description 165–167
  - views 168–174

## D

- data set
  - analysis 203
  - database I/O delays 58
  - I/O delays 61
    - by IMS 62
    - by PSB 62
    - by transaction 63
    - by volume 63
  - management 206–209
  - trace log 84
  - volume information 203
- data set views
  - description 203–205
  - hyperlinks 204
  - views 206–209

- data sharing group
  - resource contention 129
    - analyzing 130
  - sysplex performance 36
- database
  - delays
    - intent 55
    - open 55
    - recovery control 55
  - I/O delays 49, 57, 61
    - by data set 58
    - by IMS 58
    - by PSB 59
    - by transaction 59
    - by volume 60
- database activity views 175
- database monitors 100
- database views 151
- DBCDDL 34
- DBCDDLGR 34
- DBCDDLGR 26, 34
  - description 26–32
- DBCDDLGR 34
- DBCPLM 36
- DBCPLMG 36
- DBCPLMGR 36
- DBCPLMR 36
- DBCPLS 36
- DBCPLSG 36
- DBCPLSGR 36
- DBCPLSR 36
- DBCPLX 36
- DBCPLXG 36
- DBCPLXGR 36
- DBCPLXR 36, 37
- DBCTL
  - Easy Menu 21
- DBRC delay 55
- DBWP 56
- DEDB delay 55
- defaults
  - sampler 216
- defining workloads 105
- delays
  - AOI request 55
  - command 55
  - data set
    - I/O delay 61, 63
    - I/O delay by IMS 62
    - I/O delay by PSB 62
    - I/O delay by transaction 63
    - I/O delay by volume 63
  - data set I/O 49

- delays (continued)
  - database
    - I/O delay 57
    - I/O delay by data set 58
    - I/O delay by IMS 58
    - I/O delay by PSB 59
    - I/O delay by transaction 59
    - I/O delay by volume 60
    - intent 55
    - open 55
  - database I/O 49
  - DBRC 55
  - DEDB 55
  - DMAC 55
  - dynamic allocation 55
  - Fast Path 55
  - I/O 52
  - IRLM 55
  - latch 49, 53
    - by IMS 72
    - by transaction 73
    - delay by PSB 72
  - latches 44, 71
  - lock 44, 54, 68
    - by IMS 69
    - by PSB 69
    - by transaction 70
  - log buffer 55
  - pool 49, 56
  - processing events 41
  - resources 41
  - transaction 49, 51
    - analysis 41–82
  - unit of work processing 41
  - volume
    - I/O delay 64
    - I/O delay by data set 65
    - I/O delay by database 65
    - I/O delay by IMS 66
    - I/O delay by PSB 66
    - I/O delay by transaction 67
  - volume I/O 49
- detail trace 86, 91
- directory
  - trace 87
  - trace log data sets 84
- DL/I
  - calls
    - by transaction 79
  - events
    - by transaction 78
- DMAC delay 55
- DMBP 56
- DRGCCTL 38
- DRGNDLIR 123
- DRGNDTLR 121
- DRGNFPLR 124
- DRGNPGMR 125
- DRGNPILR 127

- DRGNSUMR 119
- DRGOCC 38
- DRGOCCG 38
- DRGOCCGR 38
- DRGOCCR 38, 39
- DRGOVW 38
- DRGOVWR 38
- DSVDTL 209
- DSVDTLR 208
- DSVSUM 207
- DSVSUMR 206

## E

- Easy Menus 17
- elapsed time 49
  - problems 43
  - processing events 74
  - transaction 41–48
  - UOW 41–82
- elapsed timing monitors 98
- ESM 219
- events
  - application 77
  - DL/I 78
  - DL/I calls 79
  - processing
    - by transaction 76
  - processing components 74
  - ROLS 81
  - scheduling 82
  - sync point 80
- external security manager 219
- EZIFAST 17, 20
- EZIMS 17–21
- EZISSI 17, 19

## F

- Fast Menu 17
- Fast Path
  - activity monitors 97
  - DEDB area views 143–149
  - extended PCB pool monitor (EPCB) 101
  - identifying delays 55–70
  - region activity view (DRGNFPLR) 124
- FPCB 56

## G

- global region call monitors 98
- graph
  - view 26

## H

- hyperlink
  - to Object Easy Menus 21
  - to other MAINVIEW for DBCTL views 12

# I

I#CIC 97  
I#OBAW 97  
I\$CBMP 98  
I\$CDBT 98  
I\$CTOT 98  
I/O  
    data set delays 61  
        by IMS 62  
        by PSB 62  
        by transaction 63  
        by volume 63  
    database delays 57  
        by data set 58  
        by IMS 58  
        by PBS 59  
        by transaction 59  
        by volume 60  
    delays 44, 52  
    volume delays 64  
        by data set 65  
        by database 65  
        by IMS 66  
        by PSB 66  
        by transaction 67  
I@ELAP 98  
I@OBA 97  
ICSAUT 103  
ID2CON 99  
ID2SON 99  
ID2THD 99  
IDABODTR 196  
IDABOSMR 200  
IDABVDTR 194  
IDABVSMR 198  
IDAGDTLR 179  
IDALGSMR 186  
IDALSUMR 186  
IDAPGSMR 188  
IDAPSUMR 188  
IDASDTLR 183  
IDASSUMR 181  
IDAVGSMR 192  
IDAVSUMR 192  
IDAXGSMR 190  
IDAXSUMR 190  
IDBDTLR 155  
IDBHIT 100  
IDBIO 100  
IDBMR 158  
IDBSTAR 157  
IDBSTL 100  
IDBSUMR 153, 156  
IDBTYPR 156  
IDBWP 101  
IDLDB 57  
IDLDBD 58  
IDLDBI 58  
IDLDBTR 59  
IDLDBV 60  
IDLDD 61  
IDLDDI 62  
IDLDDP 62  
IDLDDTR 63  
IDLDDV 63  
IDLIO 103  
IDLLH 71  
IDLLHI 72  
IDLLHP 72  
IDLLHTR 73  
IDLLK 68  
IDLLKI 69  
IDLLKP 69  
IDLLKTR 70  
IDLRPL 56  
IDLTR 44, 51  
IDLTRIO 52  
IDLTRLH 53  
IDLTRLK 54  
IDLTROT 55  
IDLTRPL 56  
IDLVL 64  
IDLVLDB 65  
IDLVLDD 65  
IDLVLI 66  
IDLVLV 66  
IDLVLTR 67  
IDMBP 101  
IDPAGE 103  
IDSAP 101  
IECSAU 103  
IEPCB 101  
IFCTR 74, 76  
IFCTRA 77  
IFCTRD 78  
IFCTRI 79  
IFCTRP 80  
IFCTRR 81  
IFCTRS 82  
IFPDTLR 146  
IFPMR 149  
IFPORGR 147  
IFPSTAR 148  
IFPSUMR 145  
IHPACC 100  
IHPHIT 100  
IHPSTL 100  
ILAWT 101  
ILDLCCK 104  
ILHELD 104  
ILKREQ 104  
ILKRGLST 133  
ILKRGSUM 131  
ILKRGWT 135, 140  
ILKRSLST 130, 138  
ILKRSSUM 136  
ILKR SWT 140  
ILSUSP 104

- ILWNUM 104
- IMAREAZ 95
- IMON 94
- IMS
  - activity views 34
  - database I/O delays 58
  - Easy Menus 17–21
  - Fast Menu 17–21
  - I/O delay
    - data set 62
    - volume 66
  - latch delays 72
  - lock delays 69
  - log data sets
    - analysis 206–209
  - Object Easy Menus 21
  - performance
    - OS/390 effect on 31
  - product views 221
  - resource usage 28
  - sysplex activity views 36
  - Sysplex Easy Menu 19
  - sysplex performance 37
- IMS database activity views
  - See* database activity views
- IMS product views 221
- IMSDTLGR 35
- IMSPlex System Manager (IPSM)
  - description 3
- IMSPLXGR 37
- IMWARN 95
- interface
  - IPSM 13
- internals monitors 101
- interval 25
  - workflow views 33
- IOBUFW 101
- IOCHKW 101
- IPGMR 161
- IPGSTAR 164
- IPGSUMR 162
- IPGTYPR 163
- IPIENQ 101
- IPIPL 101
- IPOOLA 101
- IPOOLN 101
- IPOOLT 102
- IPRDDTL 223
- IPRDSUM 222
- IPSBP 102
- IPSBW 102
- IPSM 3, 13
  - user interface 13
- IPTBLK 104
- IRLM delay 55
- IRLM lock views
  - problem analysis 130
  - views 130–140
- IRLM monitors 104

- ISAMP 213
- ISAMPD 215
- ISAMPOP 217
- ISAMPOPD 218
- ISBUSE 100
- ISERV 94
- ISYSIO 103
- ITALIST 48, 84, 86
- ITAQUERY 86
- ITASUM 86, 90
- ITASUMZ 91
- IVDBIO 100
- IVDBWR 100
- IVHIT 100
- IVSEND 104
- IWADIO 102
- IWKAP 102
- IWKLDDEF view 107
- IXDPSUMR 173
- IXDSUMR 172
- IXPDSUMR 170
- IXPSUMR 169
- IXRSUMR 168

## J

- JUDEV view 204

## L

- latch
  - delays 44, 71
    - by IMS 72
    - by PSB 72
  - by transaction 53, 73
- list
  - trace 86
- lock
  - delays 44, 68
    - by IMS 69
    - by PSB 69
  - by transaction 54, 70
- lock views
  - See* IRLM lock views
- log buffer delay 55
- log data sets
  - analysis 206–209

## M

- MAINVIEW
  - hyperlink 12
  - windows mode
    - interface 13
- MAINVIEW for OS/390
  - JUDEV view 204
- monitors
  - CICS threads 99
  - database 100



- monitors (continued)
  - elapsed timing 98
  - Fast Path resources 97
  - global region calls 98
  - in warning 95
  - internals 101
  - IRLM 104
  - list 94
  - OS/390 103
  - plot 96
  - target area 95
  - target summary 94

## N

- N-way data sharing group
  - analyzing 130
  - resource contention 129

## O

- Object Easy Menus 21
- occupancy
  - region
    - See* thread occupancy
  - thread 27, 30, 38–39
- operations views 217
- OS/390
  - effect on IMS performance 31
  - monitors 103
  - sysplex performance 36
  - views 31

## P

- paging, IMS 28
- PAS
  - sampler changes 215
- performance
  - by data sharing group 36
  - by OS/390 36
- plot 96
- pool
  - delays 44, 56
- Primary Option Menu 17
- problems
  - IRLM lock contention
    - analyzing 130
- processing events 41
  - application 77
  - by transaction 76
  - component views 74
  - DL/I
    - by transaction 78
    - calls 79
  - ROLS 81
  - scheduling 82
  - sync point 80
  - views 74

- product address space
  - sampler changes 215
- product interface 13
- product views 221
- program views
  - description 159–160
  - views 161–163
- PSB 56
  - database I/O delays 59
  - I/O delay
    - data set 62
    - volume 66
  - latch delays 72
  - lock delays 69

## Q

- query
  - trace 84, 86

## R

- RACF 219
- realtime 25
  - workflow views 33
- recovery control 55
- region
  - availability 30
  - occupancy 27, 30
  - views 38–39
  - processing summary
    - views 38
- region activity views
  - description 117–118
  - views 119–127
- resource
  - contention 129
  - IPSM
    - securing 219
  - usage 28, 36
  - IMS 28
- response time
  - See* elapsed time
- ROLS
  - events
    - by transaction 81

## S

- sampler
  - adding 215
  - changes 213, 215
  - controlling 217
  - defaults 216
  - setting 213
- scheduling
  - events, by transaction 82
- security 219
- selecting trace data 86

- SERDEF 219
- SERDEFE 220
- service-level objectives 105
- setting a sampler 213
- skeleton tailoring
  - defined 235
- summary 86
- summary trace 86, 90
- sync point
  - events
    - by transaction 80
- syntax notation xx
- sysplex 25
  - Easy Menu (EZISSI) 19
  - performance 37
    - by data sharing group 36
    - by OS/390 36
    - IMS 36
  - views
    - cross-reference 165–174
    - data set 203–209
    - Fast Path
      - DEDB area views** 143–149
      - for analyzing resource contention 130
      - IRLM lock 129–140
      - program 159–163
      - region activity 117–127
- sysplex activity
  - views 36

## T

- target system
  - sampling 213
- thread
  - availability 30
  - occupancy 27, 30
    - views 38–39
  - processing summary
    - views 38
- thread monitors 99
- threads
  - allocated 27
  - high water mark 27
  - low water mark 27
  - maximum 27
  - with excess CPU, DLI, or SQL 27
- throughput views 25
- trace 83
  - data selection 86
  - detail 86, 88, 91
  - directory 84, 87
  - entries 86
  - list 86
  - log data set 84
  - query 84, 86, 89
  - summary 90
  - transaction 47

- transaction
  - database I/O delays 59
    - by data set 58
    - by IMS 58
    - by PSB 59
    - by volume 60
  - delays 50–56
    - analysis 41–82
  - elapsed time 41–48, 49
  - flow components affecting response time 43
  - latch delays 73
  - lock delays 70
  - processing
    - events 41, 76
    - views 25, 41
  - trace 83

## U

- unit of work
  - elapsed time 41–82
- UOW
  - average elapsed time 27
  - elapsed time 41–82
  - per second 27
- UOWs 27
- user interface 13

## V

- views
  - administrative 213
  - delays 41
  - elapsed time 74
  - graph 26
  - IMS activity 34
  - IMS products 221
  - IMS sysplex activity 36
  - IRLM lock 129–140
  - operations 217
  - OS/390 31
  - processing events 74
  - product 221
  - region activity 117–127
  - region occupancy 38–39
  - sysplex
    - See* sysplex views
  - sysplex activity 36
  - thread occupancy 38–39
  - transaction
    - elapsed time delays 41
    - processing events 25
  - workflow 25
- volume
  - database I/O delays 60
  - I/O delays 64
    - by data set 65
    - by database 65
    - by IMS 66

- volume, I/O delays (continued)
  - by PSB 66
  - by transaction 67
- information
  - for IMS log data sets 203

## **W**

- workflow
  - analysis 26, 27
  - views 25
- workload
  - definitions 105
  - objectives 105



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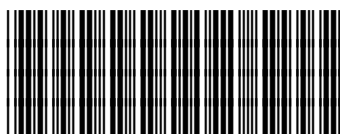
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## Notes



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